

10507227

## SEARCH IN REGISTRY AND CASREACT

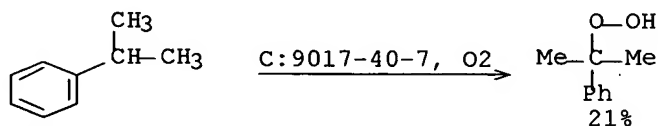
L27 ANSWER 1 OF 1 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 139:262465 CASREACT Full-text  
 TITLE: Cumene hydroperoxide and its production  
 INVENTOR(S): Codignola, Franco  
 PATENT ASSIGNEE(S): Eurotecnica Development & Licensing S.P.A., Italy  
 SOURCE: PCT Int. Appl., 27 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003076381	A1	20030918	WO 2002-IT157	20020314
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002247980	A1	20030922	AU 2002-247980	20020314
CN 1620416	A	20050525	CN 2002-828293	20020314
US 2006014985	A1	20060119	US 2005-507227	20050511
PRIORITY APPLN. INFO.:			WO 2002-IT157	20020314
AB Cumene hydroperoxide is produced by oxidizing cumene with oxygen or air, whereby this process is run in the presence of a basic medium insol. in the reaction environment, and such as not to release <b>inorg. cations</b> to the reaction environment. Such a basic medium is preferably a crosslinked 4- <b>vinylpyridine resin</b> . The cumene hydroperoxide thus obtained is free or <b>inorg. cations</b> and has a reduced dimethylphenylcarbinol content compared to products of the prior art. An example was given which used Reillex 402 <b>resin</b> .				
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L27 ANSWER 1 OF 1 CASREACT COPYRIGHT 2007 ACS on STN

RX(1) OF 1



REF: PCT Int. Appl., 2003076381, 18 Sep 2003  
 CON: STAGE(1) 112 deg C, 5 atm; 6 hours, 112 deg C, 5 atm

NOTE: THE FOLLOWING TEXT/REGISTRY SEARCHES IN CAPLUS AND USPATFULL MAY NOT BE USEFUL,  
BUT THOUGHT IT BEST TO GO BROADER SINCE THERE WAS SO LITTLE AVAILABLE IN CASREACT.  
MJR

## SEARCH IN REGISTRY AND CAPLUS

=> d que stat l38

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L7          1 SEA FILE=REGISTRY ABB=ON  "CUMENE HYDROPEROXIDE"/CN
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L9          1 SEA FILE=REGISTRY ABB=ON  4-ETHENYLPYRIDINE/CN
L10         1 SEA FILE=REGISTRY ABB=ON  DIETHENYLBENZENE/CN
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OR ?ORG?(W) ?CATION?)
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OR METHYL?(W) ?CHLORIDE?)
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111-84-2/BI OR 111-87-5/BI OR 111-90-0/BI
L37         12 SEA FILE=HCAPLUS ABB=ON  L35 AND L36
L38         12 SEA FILE=HCAPLUS ABB=ON  L37 AND (?REACT? OR ?PROCESS?)

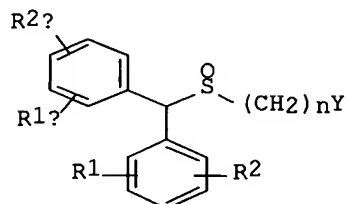
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L38 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2005:283458 HCAPLUS Full-text

DOCUMENT NUMBER: 142:355044  
 TITLE: **Process** for enantioselective synthesis of single enantiomers of modafinil and related compounds by asymmetric oxidation of the corresponding sulfides in the presence of chiral metal complexes.  
 INVENTOR(S): Rebiere, Francois; Duret, Gerard; Prat, Laurence  
 PATENT ASSIGNEE(S): Cephalon France, Fr.  
 SOURCE: PCT Int. Appl., 60 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005028428	A1	20050331	WO 2004-IB3026	20040917
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
EP 1516869	A1	20050323	EP 2003-292312	20030919
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
AU 2004274248	A1	20050331	AU 2004-274248	20040917
CA 2538697	A1	20050331	CA 2004-2538697	20040917
EP 1663963	A1	20060607	EP 2004-769402	20040917
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR			
BR 2004014298	A	20061114	BR 2004-14298	20040917
CN 1867544	A	20061122	CN 2004-80029826	20040917
NO 2006001350	A	20060405	NO 2006-1350	20060324
PRIORITY APPLN. INFO.:			EP 2003-292312	A 20030919
			US 2003-507089P	P 20031001
			WO 2004-IB3026	W 20040917
OTHER SOURCE(S):	CASREACT 142:355044; MARPAT 142:355044			
GI				



AB Title compds. (I; X = cyano, COX; X = NR<sub>3</sub>R<sub>4</sub>, OH, OR<sub>5</sub>, NHNH<sub>2</sub>; R<sub>1</sub>, R<sub>1a</sub>, R<sub>2</sub>, R<sub>2a</sub> = H, halo, alkyl, alkenyl, alkynyl, aryl, heteroaryl, cyano, CF<sub>3</sub>, NO<sub>2</sub>, OH,

alkoxy, etc.; R3, R4 = H, alkyl, hydroxyalkyl, NHOH, OH; R3R4N = atoms to form a 5-7 membered ring; n = 1-3), were prepared by contacting the corresponding prochiral sulfides with an **oxidizing agent** and a chiral metal complex in an organic solvent. Thus, Ph2CHSCH2CONH2 was stirred with Ti(OiPr)4, di-Et (S,S)-tartrate, and H2O in PhMe at 55° for 50 min.; the mixture was cooled to 25° followed by addition of diisopropylethylamine and **cumene hydroperoxide** to give after approx. 1 h 88.4% (-)-modafinil in >99.5% enantiomeric excess (at 0.30:1 ratio of Ti complex/sulfide substrate).

IT 87-91-2, Diethyl (R,R)-tartrate 546-68-9, Titanium tetraisopropoxide 7439-96-5D, Manganese, chiral complexes 7440-32-6D, Titanium, chiral complexes 7440-62-2D, Vanadium, chiral complexes 7440-67-7D, Zirconium, chiral complexes 7732-18-5, Water, uses 13811-71-7, Diethyl (S,S)-tartrate

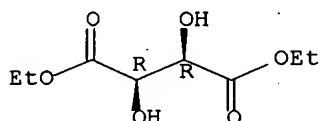
RL: CAT (Catalyst use); USES (Uses)

(enantioselective synthesis of single enantiomers of modafinil and related compds. by asym. oxidation of corresponding sulfides in presence of chiral metal complexes)

RN 87-91-2 HCAPLUS

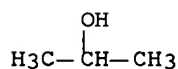
CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)-, diethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 546-68-9 HCAPLUS

CN 2-Propanol, titanium(4+) salt (4:1) (CA INDEX NAME)



●1/4 Ti(IV)

RN 7439-96-5 HCAPLUS

CN Manganese (CA INDEX NAME)

Mn

RN 7440-32-6 HCAPLUS

CN Titanium (CA INDEX NAME)

Ti

RN 7440-62-2 HCAPLUS  
CN Vanadium (CA INDEX NAME)

V

RN 7440-67-7 HCAPLUS  
CN Zirconium (CA INDEX NAME)

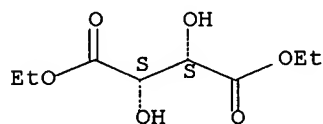
Zr

RN 7732-18-5 HCAPLUS  
CN Water (CA INDEX NAME)

H<sub>2</sub>O

RN 13811-71-7 HCAPLUS  
CN Butanedioic acid, 2,3-dihydroxy-, 1,4-diethyl ester, (2S,3S)- (CA INDEX NAME)

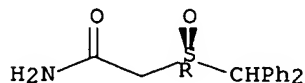
Absolute stereochemistry. Rotation (-).



IT 112111-43-0P, (-)-Modafinil 112111-47-4P, (+)-Modafinil  
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
(enantioselective synthesis of single enantiomers of modafinil and related compds. by asym. oxidation of corresponding sulfides in presence of chiral metal complexes)

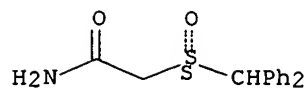
RN 112111-43-0 HCAPLUS  
CN Acetamide, 2-[(R)-(diphenylmethyl)sulfinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

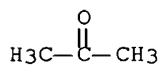


RN 112111-47-4 HCAPLUS  
CN Acetamide, 2-[(S)-(diphenylmethyl)sulfinyl]- (9CI) (CA INDEX NAME)

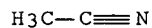
Absolute stereochemistry. Rotation (+).



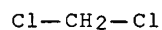
IT 67-64-1, Acetone, uses 75-05-8, Acetonitrile, uses  
 75-09-2, **Methylene chloride**, uses  
 108-88-3, Toluene, uses 109-99-9, Tetrahydrofuran, uses  
 141-78-6, Ethyl acetate, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (enantioselective synthesis of single enantiomers of modafinil and  
 related compds. by asym. oxidation of corresponding sulfides in presence  
 of chiral metal complexes)  
 RN 67-64-1 HCAPLUS  
 CN 2-Propanone (CA INDEX NAME)



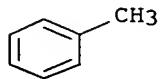
RN 75-05-8 HCAPLUS  
 CN Acetonitrile (CA INDEX NAME)



RN 75-09-2 HCAPLUS  
 CN Methane, dichloro- (CA INDEX NAME)



RN 108-88-3 HCAPLUS  
 CN Benzene, methyl- (CA INDEX NAME)



RN 109-99-9 HCAPLUS  
 CN Furan, tetrahydro- (CA INDEX NAME)

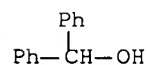


RN 141-78-6 HCAPLUS

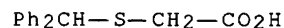
CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)

Et-O-Ac

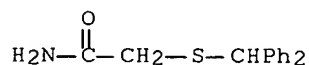
IT **91-01-0**, Benzhydrol **63547-22-8**, 2-(Diphenylmethylthio)acetic acid  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (enantioselective synthesis of single enantiomers of modafinil and related compds. by asym. oxidation of corresponding sulfides in presence of chiral metal complexes)  
 RN 91-01-0 HCAPLUS  
 CN Benzenemethanol,  $\alpha$ -phenyl- (9CI) (CA INDEX NAME)



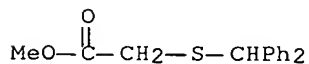
RN 63547-22-8 HCAPLUS  
 CN Acetic acid, [(diphenylmethyl)thio]- (9CI) (CA INDEX NAME)



IT **68524-30-1P**, 2-(Diphenylmethylthio)acetamide **118286-24-1P**, Methyl 2-(diphenylmethylthio)acetate  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (enantioselective synthesis of single enantiomers of modafinil and related compds. by asym. oxidation of corresponding sulfides in presence of chiral metal complexes)  
 RN 68524-30-1 HCAPLUS  
 CN Acetamide, 2-[(diphenylmethyl)thio]- (9CI) (CA INDEX NAME)



RN 118286-24-1 HCAPLUS  
 CN Acetic acid, [(diphenylmethyl)thio]-, methyl ester (9CI) (CA INDEX NAME)



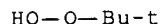
IT **75-91-2**, tert-Butyl hydroperoxide **80-15-9**, Cumene hydroperoxide **121-44-8**, Triethylamine, reactions **7087-68-5**, Diisopropylethylamine **7722-84-1**, Hydrogen peroxide, reactions

10/507,227

RL: RGT (Reagent); RACT (Reactant or reagent)  
(enantioselective synthesis of single enantiomers of modafinil and  
related compds. by asym. oxidation of corresponding sulfides in presence  
of chiral metal complexes)

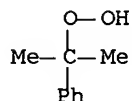
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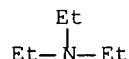
RN 80-15-9 HCAPLUS

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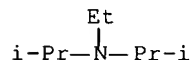
RN 121-44-8 HCAPLUS

CN Ethanamine, N,N-diethyl- (CA INDEX NAME)



RN 7087-68-5 HCAPLUS

CN 2-Propanamine, N-ethyl-N-(1-methylethyl)- (CA INDEX NAME)



RN 7722-84-1 HCAPLUS

CN Hydrogen peroxide (H2O2) (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:253270 HCAPLUS Full-text

DOCUMENT NUMBER: 142:316576

TITLE: **Process** for enantioselective synthesis of  
single enantiomers of modafinil by asymmetric  
oxidation

INVENTOR(S): Rebiere, Francois; Duret, Gerard; Prat, Laurence



PATENT ASSIGNEE(S): Cephalon France, Fr.  
 SOURCE: Eur. Pat. Appl., 24 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1516869	A1	20050323	EP 2003-292312	20030919
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
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CA 2538697	A1	20050331	CA 2004-2538697	20040917
WO 2005028428	A1	20050331	WO 2004-IB3026	20040917
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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US 2005080256	A1	20050414	US 2004-943360	20040917
EP 1663963	A1	20060607	EP 2004-769402	20040917
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BR 2004014298	A	20061114	BR 2004-14298	20040917
CN 1867544	A	20061122	CN 2004-80029826	20040917
US 2005222257	A1	20051006	US 2005-82530	20050317
NO 2006001350	A	20060405	NO 2006-1350	20060324
PRIORITY APPLN. INFO.:			EP 2003-292312	A 20030919
			US 2003-507089P	P 20031001
			US 2004-943360	A2 20040917
			WO 2004-IB3026	W 20040917

OTHER SOURCE(S): CASREACT 142:316576; MARPAT 142:316576

AB Sulfoxides RR1CHS(O)(CH2)nY [R, R1 = (un)substituted Ph; Y = CN, COR2; R2 = (un)substituted NH2, OH, NHNH2; n = 1-3] were prepared as a single enantiomer or in an enantiomerically enriched form by contacting pro-chiral sulfides RR1CHS(CH2)nY with a metal chiral complex, a base and an **oxidizing agent** in an organic solvent. Thus, Ph2CHSCH2CONH2 was oxidized with **cumene hydroperoxide** in presence of (S,S)-(-)-diethyl tartrate, Ti(OCHMe2)4, water and EtN(CHMe2)2 in PhMe to give 88.4% (-)-modafinil in < 99.5 % ee.

IT **87-91-2**, Diethyl (R,R)-(+)-tartrate **546-68-9**, Titanium tetrakisopropoxide **611-71-2**, (R)-Mandelic acid **7732-18-5**, Water, uses **13811-71-7**, Diethyl (S,S)-(-)-tartrate

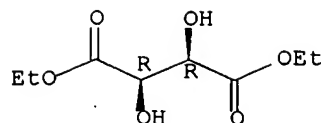
RL: CAT (Catalyst use); USES (Uses)

(enantioselective synthesis of single enantiomers of modafinil by asym. oxidation)

RN 87-91-2 HCAPLUS

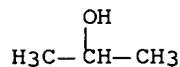
CN Butanedioic acid, 2,3-dihydroxy- (2R,3R)-, diethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 546-68-9 HCAPLUS

CN 2-Propanol, titanium(4+) salt (4:1) (CA INDEX NAME)

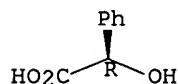


●1/4 Ti(IV)

RN 611-71-2 HCAPLUS

CN Benzeneacetic acid,  $\alpha$ -hydroxy-, ( $\alpha$ R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



RN 7732-18-5 HCAPLUS

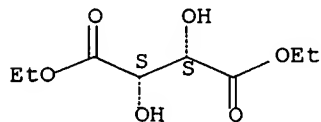
CN Water (CA INDEX NAME)

H<sub>2</sub>O

RN 13811-71-7 HCAPLUS

CN Butanedioic acid, 2,3-dihydroxy-, 1,4-diethyl ester, (2S,3S)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 75-09-2, Methylene chloride, uses

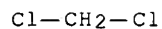
108-88-3, Toluene, uses 141-78-6, Ethyl acetate, uses

RL: NUU (Other use, unclassified); USES (Uses)

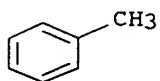
(enantioselective synthesis of single enantiomers of modafinil by asym. oxidation)

RN 75-09-2 HCAPLUS

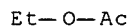
CN Methane, dichloro- (CA INDEX NAME)



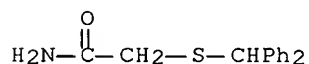
RN 108-88-3 HCAPLUS  
 CN Benzene, methyl- (CA INDEX NAME)



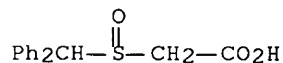
RN 141-78-6 HCAPLUS  
 CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)



IT **68524-30-1**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (enantioselective synthesis of single enantiomers of modafinil by asym.  
 oxidation)  
 RN 68524-30-1 HCAPLUS  
 CN Acetamide, 2-[(diphenylmethyl)thio]- (9CI) (CA INDEX NAME)



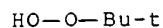
IT **63547-24-0P**, Modafinil acid  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (enantioselective synthesis of single enantiomers of modafinil by asym.  
 oxidation)  
 RN 63547-24-0 HCAPLUS  
 CN Acetic acid, [(diphenylmethyl)sulfinyl]- (9CI) (CA INDEX NAME)



IT **75-91-2**, tert.-Butyl hydroperoxide **80-15-9**,  
**Cumene hydroperoxide 121-44-8**, Triethylamine,  
**reactions 7087-68-5**, Hunig's base **7722-84-1**,  
 Hydrogen peroxide, **reactions**  
 RL: RGT (Reagent); RACT (Reactant or reagent)  
 (enantioselective synthesis of single enantiomers of modafinil by asym.  
 oxidation)  
 RN 75-91-2 HCAPLUS

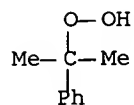
10/507,227

CN Hydroperoxide, 1,1-dimethylethyl (9CI) (CA INDEX NAME)



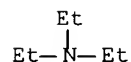
RN 80-15-9 HCAPLUS

CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)



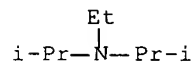
RN 121-44-8 HCAPLUS

CN Ethanamine, N,N-diethyl- (CA INDEX NAME)



RN 7087-68-5 HCAPLUS

CN 2-Propanamine, N-ethyl-N-(1-methylethyl)- (CA INDEX NAME)



RN 7722-84-1 HCAPLUS

CN Hydrogen peroxide (H2O2) (9CI) (CA INDEX NAME)



IT 112111-43-0P, (-)-Modafinil

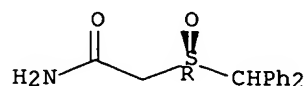
RL: SPN (Synthetic preparation); PREP (Preparation)

(enantioselective synthesis of single enantiomers of modafinil by asym. oxidation)

RN 112111-43-0 HCAPLUS

CN Acetamide, 2-[(R)-(diphenylmethyl)sulfinyl]- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:971704 HCAPLUS Full-text

DOCUMENT NUMBER: 140:28777

TITLE: Cleaning compositions containing dichloroethylene and alkoxy substituted perfluoro compounds having six carbon atoms

INVENTOR(S): Doyel, Kyle; Bixenman, Michael

PATENT ASSIGNEE(S): Kyzen Corporation, USA

SOURCE: U.S. Pat. Appl. Publ., 15 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003228997	A1	20031211	US 2002-164308	20020607
US 6699829	B2	20040302		
CA 2474669	A1	20031218	CA 2003-2474669	20030609
WO 2003104365	A2	20031218	WO 2003-US18089	20030609
WO 2003104365	A3	20040415		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003259032	A1	20031222	AU 2003-259032	20030609
EP 1511833	A2	20050309	EP 2003-757433	20030609
EP 1511833	B1	20070110		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005523991	T	20050811	JP 2004-511426	20030609
CN 1656207	A	20050817	CN 2003-804066	20030609
US 2004224870	A1	20041111	US 2003-694747	20031029
BR 2004005398	A	20060829	BR 2004-5398	20041207
PRIORITY APPLN. INFO.:			US 2002-164308	A 20020607
			WO 2003-US18089	W 20030609

OTHER SOURCE(S): MARPAT 140:28777

AB A cleaning composition comprises dichloroethylene and one or more alkoxy-substituted perfluoro compds. that contain six carbon atoms and have the general formula R1-O-R2, where R1 is perfluorobutyl and R2 is Et, or R1 is perfluoropentyl and R2 is Me, and an additive selected from (a) a highly fluorinated compound of the formula CaFbHcXd, where a is from 2 to 8, b is > a but < (2a+2), d is 0,1, or 2, c is ≤ (2a+2-b-d), and X is O, N, halogen, or Si, (b) an enhancement agent selected from alcs., esters, ethers, cyclic ethers, ketones, alkanes, aroms., amines, siloxanes, terpenes, dibasic esters, glycol ethers, pyrrolidones, low or non-ozone depleting halogenated hydrocarbons, and (c) mixts. of (a) and (b). The highly fluorinated compds. retard flammability of the cleaning composition, and the enhancement agents improve the cleaning or solvating properties. The cleaning compns. are useful in a variety of solvating, vapor degreasing, photoresist stripping, adhesive

removal, aerosol, cold cleaning, and solvent cleaning applications, including defluxing, dry-cleaning, degreasing, particle removal, metal and textile cleaning. Thus, a nonflammable cleaning composition comprising 1,2-trans-dichloroethylene (71), Et perfluorobutyl ether (HFE 7200) (28.5), and n-propanol (0.5%) was produced, the composition forming an azeotrope with b.p. of 47° at 1 atmospheric

IT 57-55-6, Propylene glycol, uses 60-29-7, Diethyl ether, uses 64-17-5, Ethanol, uses 67-56-1, Methanol, uses 67-63-0, Isopropanol, uses 67-64-1, Acetone, uses 71-23-8, n-Propanol, uses 71-36-3, Butyl alcohol, uses 71-41-0, 1-Pentanol, uses 71-43-2, Benzene, uses 74-84-0, Ethane, uses 74-87-3, **Methyl chloride**, uses 74-89-5, Methylamine, uses 74-98-6, Propane, uses 75-00-3, Ethyl chloride 75-04-7, Ethylamine, uses 75-09-2, **Methylene chloride**, uses 75-21-8, Ethylene oxide, uses 75-28-5, 2-Methylpropane 75-29-6, Isopropyl chloride 75-31-0, Isopropylamine, uses 75-50-3, Trimethylamine, uses 75-56-9, Propylene oxide, uses 75-64-9, tert-Butylamine, uses 75-65-0, tert-Butyl alcohol, uses 75-89-8 76-16-4, Perfluoroethane 76-19-7, Perfluoropropane 78-78-4, Isopentane 78-81-9, Isobutylamine 78-86-4, sec-Butyl chloride 78-92-2, 2-Butanol 78-93-3, Methyl ethyl ketone, uses 79-20-9, Methyl acetate 95-63-6, **Pseudocumene** 96-22-0, 3-Pentanone 96-41-3, Cyclopentanol 97-99-4, Tetrahydrofurfuryl alcohol 98-00-0, Furfuryl alcohol 98-08-8, Benzotrifluoride 98-82-8, **Cumene** 100-41-4, Ethylbenzene, uses 100-51-6, Benzyl alcohol, uses 100-66-3, Anisole, uses 102-69-2, Tri-n-propylamine 102-71-6, Triethanolamine, uses 104-51-8, Butylbenzene 104-76-7, 2-Ethylhexanol 105-37-3, Ethyl propionate 105-54-4, Ethyl butyrate 105-66-8, Propyl butyrate 106-36-5, Propyl propionate, uses 106-65-0, Dimethyl succinate 106-94-5, Propyl bromide 106-97-8, Butane, uses 107-10-8, n-Propylamine, uses 107-18-6, Allyl alcohol, uses 107-21-1, Ethylene glycol, uses 107-31-3, Methyl formate 107-46-0, Hexamethyl disiloxane 107-51-7, Octamethyl trisiloxane 107-83-5, Isohexane 107-87-9, 2-Pentanone 108-10-1, Methyl isobutyl ketone 108-18-9, Diisopropylamine 108-20-3, Isopropyl ether 108-59-8, Dimethyl malonate 108-67-8, Mesitylene, uses 108-88-3, Toluene, uses 108-93-0, Cyclohexanol, uses 108-95-2, Phenol, uses 109-21-7, Butyl butyrate 109-60-4, Propyl acetate 109-66-0, Pentane, uses 109-69-3, Butyl chloride 109-73-9, n-Butylamine, uses 109-86-4, Ethylene glycol methyl ether 109-87-5, Methylal 109-89-7, Diethylamine, uses 109-93-3, Vinyl ether 109-94-4, Ethyl formate 109-99-9, THF, uses 110-27-0, Isopropyl myristate 110-36-1, Butyl myristate 110-54-3, Hexane, uses 110-74-7, Propyl formate 110-80-5, Ethylene glycol ethyl ether 110-82-7, Cyclohexane, uses 111-27-3, 1-Hexanol, uses 111-42-2, Diethanolamine, uses 111-43-3, Propyl ether 111-65-9, Octane, uses 111-76-2, Ethylene glycol butyl ether 111-77-3, Diethylene glycol methyl ether 111-84-2, Nonane 111-87-5, 1-Octanol, uses 111-90-0, Diethylene glycol ethyl ether 112-30-1, 1-Decanol 112-34-5, Diethylene glycol butyl ether 112-53-8, 1-Dodecanol 115-10-6, Methyl ether

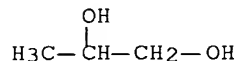
121-44-8, Triethylamine, uses 123-25-1, Diethyl succinate 123-86-4, Butyl acetate 123-91-1, 1,4-Dioxane, uses 124-18-5, Decane 124-40-3, Dimethylamine, uses 124-68-5 138-86-3, Dipentene 141-28-6, Diethyl adipate 141-43-5, Ethanolamine, uses 141-62-8, Decamethyl tetrasiloxane 141-78-6, Ethyl acetate, uses 142-68-7, Tetrahydropyran 142-82-5, Heptane, uses 142-84-7, Di-n-propylamine 142-96-1, Butyl ether 287-92-3, Cyclopentane 354-33-6, Pentafluoroethane 355-25-9, Perfluorobutane 355-42-0, Perfluorohexane 377-36-6, 1,1,2,2,3,3,4,4-Octafluorobutane 460-35-5, 3-Chloro-1,1,1 trifluoropropane 462-95-3, Ethylal 507-20-0, tert-Butyl chloride 513-36-0, Isobutyl chloride 526-73-8, Hemimellitene 540-54-5, Propyl chloride 543-59-9, Pentyl chloride 544-01-4, Isoamyl oxide 544-10-5, Hexyl chloride 553-90-2, Dimethyl oxalate 554-12-1, Methyl propionate 557-40-4, Allyl ether 584-02-1, 3-Pentanol 589-38-8, 3-Hexanone 590-01-2, Butyl propionate 591-78-6, 2-Hexanone 592-84-7, Butyl formate 616-45-5, Pyrrolidone 623-37-0, 3-Hexanol 623-42-7, Methyl butyrate 626-93-7, 2-Hexanol 627-73-6, Ethyl methyl succinate 627-93-0, Dimethyl adipate 637-92-3 646-06-0, 1,3-Dioxolane 678-26-2, Perfluoropentane 693-65-2 828-35-3, 1,1,2,2,3,3,4,5-Octafluorocyclopentane 872-50-4, N-Methylpyrrolidone, uses 1119-40-0, Dimethyl glutarate 1300-21-6, Dichloroethane 1320-67-8, Propylene glycol methyl ether 1320-94-1 1330-16-1, Pinene 1330-20-7, Xylene, uses 1634-04-4, Methyl tert-butyl ether 1678-91-7, Ethylcyclohexane 2687-91-4, N-Ethylpyrrolidone 2807-30-9, Ethylene glycol propyl ether 3424-21-3, Triisopropylamine 3445-11-2 3470-99-3, N-Propylpyrrolidone 4838-65-7 5989-27-5, D-Limonene 6032-29-7, 2-Pentanol 6881-94-3 7803-49-8, Hydroxylamine, uses 8006-39-1, Terpinol 13952-84-6, sec-Butylamine 14303-70-9, Propyl myristate 15438-71-8, 1-Hydroxymethyl-2-pyrrolidinone 18891-13-9, Ethyl methyl adipate 19430-93-4 25265-68-3, Methyltetrahydrofuran 25265-71-8, Dipropylene glycol 25265-75-2, Butylene glycol 26249-20-7, Butylene oxide 26447-60-9, Octafluorobutane 26638-19-7 27070-61-7, Hexafluoropropane 27195-67-1, Dimethylcyclohexane 28987-04-4 29387-86-8, Propylene glycol butyl ether 29470-95-9 29759-38-4, Tetrafluoroethane 29911-27-1, Dipropylene glycol propyl ether 30136-13-1, Propylene glycol propyl ether 30320-28-6 30423-63-3 30521-24-5 33660-75-2, Heptafluoropropane 34077-87-7, Dichlorotrifluoroethane 34590-94-8, Dipropylene glycol methyl ether 35884-42-5, Dipropylene glycol butyl ether 37145-47-4, Pentafluoropropane 38436-17-8, Nonafluorohexane 38719-68-5, Dimethylbutane 43133-95-5, Methylpentane 51000-94-3 51001-25-3, Methyltetrahydropyran 55949-54-7, Nonafluorobutane 61623-04-9 72923-37-6 74469-62-8, Hexafluorobutane 76083-84-6 86498-66-0, Dodecafluorohexane 90278-00-5 90278-01-6 102526-10-3, 1,1,1,3,3,5,5,5-Octafluoropentane 116866-99-0, Heptafluorobutane 127564-83-4 127564-91-4 127564-92-5, Dichloropentafluoropropane 133452-70-7, Tridecafluorohexane 134190-50-4 134237-36-8

10/507,227

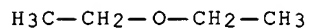
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139063-93-7 148565-53-1 154275-17-9,  
Undecafluorohexane 154275-19-1, Octafluorohexane  
154275-56-6 155072-58-5, Decafluorohexane  
163702-07-6, 1,1,1,2,2,3,3,4,4-Nonafluoro-4-methoxybutane  
186493-81-2 186493-83-4 219484-64-7, HFE 7100  
519154-84-8

RL: MOA (Modifier or additive use); USES (Uses)  
(cleaning compns. containing dichloroethylene and alkoxy substituted  
perfluoro compds. having six carbon atoms)

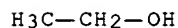
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CN 1,2-Propanediol (CA INDEX NAME)



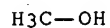
RN 60-29-7 HCAPLUS  
CN Ethane, 1,1'-oxybis- (9CI) (CA INDEX NAME)



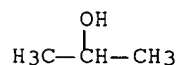
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CN Ethanol (CA INDEX NAME)



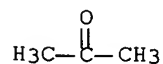
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CN Methanol (CA INDEX NAME)



RN 67-63-0 HCAPLUS  
CN 2-Propanol (CA INDEX NAME)

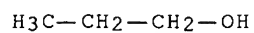


RN 67-64-1 HCAPLUS  
CN 2-Propanone (CA INDEX NAME)

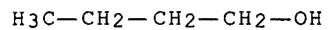




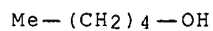
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CN 1-Propanol (CA INDEX NAME)



RN 71-36-3 HCAPLUS  
CN 1-Butanol (CA INDEX NAME)



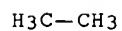
RN 71-41-0 HCAPLUS  
CN 1-Pentanol (CA INDEX NAME)



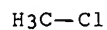
RN 71-43-2 HCAPLUS  
CN Benzene (CA INDEX NAME)



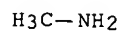
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CN Ethane (CA INDEX NAME)



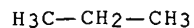
RN 74-87-3 HCAPLUS  
CN Methane, chloro- (CA INDEX NAME)



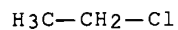
RN 74-89-5 HCAPLUS  
CN Methanamine (CA INDEX NAME)



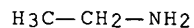
RN 74-98-6 HCAPLUS  
CN Propane (CA INDEX NAME)



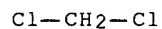
RN 75-00-3 HCAPLUS  
CN Ethane, chloro- (CA INDEX NAME)



RN 75-04-7 HCAPLUS  
CN Ethanamine (CA INDEX NAME)



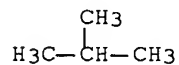
RN 75-09-2 HCAPLUS  
CN Methane, dichloro- (CA INDEX NAME)



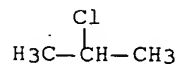
RN 75-21-8 HCAPLUS  
CN Oxirane (CA INDEX NAME)



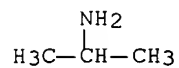
RN 75-28-5 HCAPLUS  
CN Propane, 2-methyl- (CA INDEX NAME)



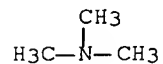
RN 75-29-6 HCAPLUS  
CN Propane, 2-chloro- (CA INDEX NAME)



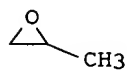
RN 75-31-0 HCAPLUS  
 CN 2-Propanamine (CA INDEX NAME)



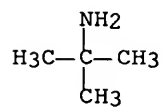
RN 75-50-3 HCAPLUS  
 CN Methanamine, N,N-dimethyl- (CA INDEX NAME)



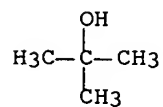
RN 75-56-9 HCAPLUS  
 CN Oxirane, 2-methyl- (CA INDEX NAME)



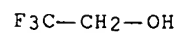
RN 75-64-9 HCAPLUS  
 CN 2-Propanamine, 2-methyl- (CA INDEX NAME)



RN 75-65-0 HCAPLUS  
 CN 2-Propanol, 2-methyl- (CA INDEX NAME)

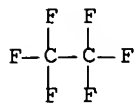


RN 75-89-8 HCAPLUS  
 CN Ethanol, 2,2,2-trifluoro- (CA INDEX NAME)

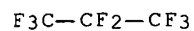


10/507,227

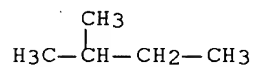
RN 76-16-4 HCAPLUS  
CN Ethane, hexafluoro- (8CI, 9CI) (CA INDEX NAME)



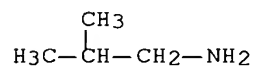
RN 76-19-7 HCAPLUS  
CN Propane, octafluoro- (6CI, 8CI, 9CI) (CA INDEX NAME)



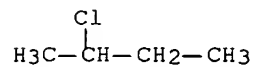
RN 78-78-4 HCAPLUS  
CN Butane, 2-methyl- (CA INDEX NAME)



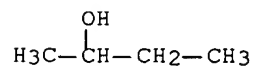
RN 78-81-9 HCAPLUS  
CN 1-Propanamine, 2-methyl- (CA INDEX NAME)



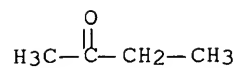
RN 78-86-4 HCAPLUS  
CN Butane, 2-chloro- (CA INDEX NAME)



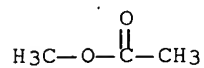
RN 78-92-2 HCAPLUS  
CN 2-Butanol (CA INDEX NAME)



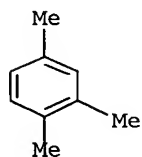
RN 78-93-3 HCAPLUS  
CN 2-Butanone (CA INDEX NAME)



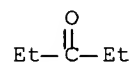
RN 79-20-9 HCAPLUS  
CN Acetic acid, methyl ester (CA INDEX NAME)



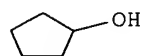
RN 95-63-6 HCAPLUS  
CN Benzene, 1,2,4-trimethyl- (CA INDEX NAME)



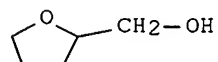
RN 96-22-0 HCAPLUS  
CN 3-Pentanone (CA INDEX NAME)



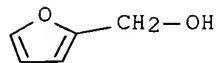
RN 96-41-3 HCAPLUS  
CN Cyclopentanol (CA INDEX NAME)



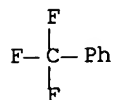
RN 97-99-4 HCAPLUS  
CN 2-Furanmethanol, tetrahydro- (CA INDEX NAME)



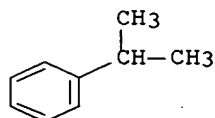
RN 98-00-0 HCAPLUS  
CN 2-Furanmethanol (CA INDEX NAME)



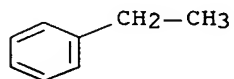
RN 98-08-8 HCAPLUS  
 CN Benzene, (trifluoromethyl)- (CA INDEX NAME)



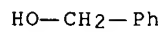
RN 98-82-8 HCAPLUS  
 CN Benzene, (1-methylethyl)- (CA INDEX NAME)



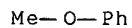
RN 100-41-4 HCAPLUS  
 CN Benzene, ethyl- (CA INDEX NAME)



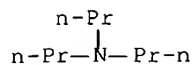
RN 100-51-6 HCAPLUS  
 CN Benzenemethanol (CA INDEX NAME)



RN 100-66-3 HCAPLUS  
 CN Benzene, methoxy- (CA INDEX NAME)

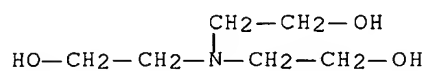


RN 102-69-2 HCAPLUS  
 CN 1-Propanamine, N,N-dipropyl- (CA INDEX NAME)



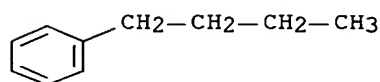
RN 102-71-6 HCAPLUS

CN Ethanol, 2,2',2''-nitrilotris- (9CI) (CA INDEX NAME)



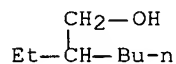
RN 104-51-8 HCAPLUS

CN Benzene, butyl- (CA INDEX NAME)



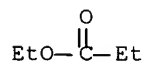
RN 104-76-7 HCAPLUS

CN 1-Hexanol, 2-ethyl- (CA INDEX NAME)



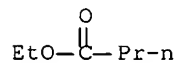
RN 105-37-3 HCAPLUS

CN Propanoic acid, ethyl ester (CA INDEX NAME)



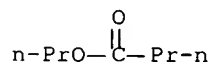
RN 105-54-4 HCAPLUS

CN Butanoic acid, ethyl ester (CA INDEX NAME)

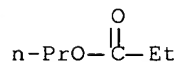


RN 105-66-8 HCAPLUS

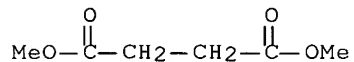
CN Butanoic acid, propyl ester (CA INDEX NAME)



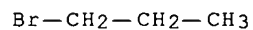
RN 106-36-5 HCAPLUS  
 CN Propanoic acid, propyl ester (CA INDEX NAME)



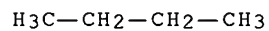
RN 106-65-0 HCAPLUS  
 CN Butanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



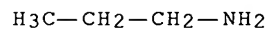
RN 106-94-5 HCAPLUS  
 CN Propane, 1-bromo- (CA INDEX NAME)



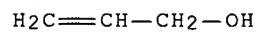
RN 106-97-8 HCAPLUS  
 CN Butane (CA INDEX NAME)



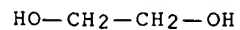
RN 107-10-8 HCAPLUS  
 CN 1-Propanamine (CA INDEX NAME)



RN 107-18-6 HCAPLUS  
 CN 2-Propen-1-ol (CA INDEX NAME)

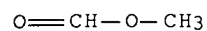


RN 107-21-1 HCAPLUS  
 CN 1,2-Ethanediol (CA INDEX NAME)

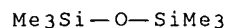




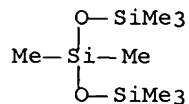
RN 107-31-3 HCAPLUS  
 CN Formic acid, methyl ester (CA INDEX NAME)



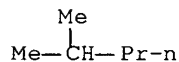
RN 107-46-0 HCAPLUS  
 CN Disiloxane, 1,1,1,3,3,3-hexamethyl- (CA INDEX NAME)



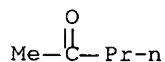
RN 107-51-7 HCAPLUS  
 CN Trisiloxane, octamethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



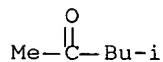
RN 107-83-5 HCAPLUS  
 CN Pentane, 2-methyl- (CA INDEX NAME)



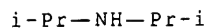
RN 107-87-9 HCAPLUS  
 CN 2-Pentanone (CA INDEX NAME)



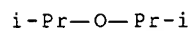
RN 108-10-1 HCAPLUS  
 CN 2-Pentanone, 4-methyl- (CA INDEX NAME)



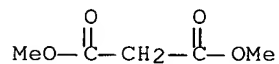
RN 108-18-9 HCAPLUS  
 CN 2-Propanamine, N-(1-methylethyl)- (CA INDEX NAME)



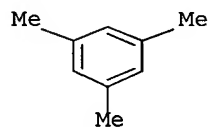
RN 108-20-3 HCAPLUS  
 CN Propane, 2,2'-oxybis- (9CI) (CA INDEX NAME)



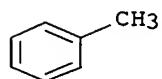
RN 108-59-8 HCAPLUS  
 CN Propanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



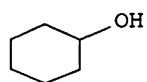
RN 108-67-8 HCAPLUS  
 CN Benzene, 1,3,5-trimethyl- (CA INDEX NAME)



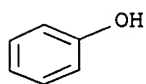
RN 108-88-3 HCAPLUS  
 CN Benzene, methyl- (CA INDEX NAME)



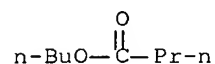
RN 108-93-0 HCAPLUS  
 CN Cyclohexanol (CA INDEX NAME)



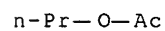
RN 108-95-2 HCAPLUS  
 CN Phenol (CA INDEX NAME)



RN 109-21-7 HCAPLUS  
 CN Butanoic acid, butyl ester (CA INDEX NAME)



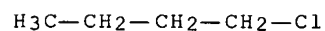
RN 109-60-4 HCAPLUS  
 CN Acetic acid, propyl ester (CA INDEX NAME)



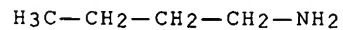
RN 109-66-0 HCAPLUS  
 CN Pentane (CA INDEX NAME)



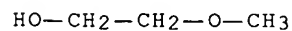
RN 109-69-3 HCAPLUS  
 CN Butane, 1-chloro- (CA INDEX NAME)



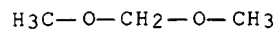
RN 109-73-9 HCAPLUS  
 CN 1-Butanamine (CA INDEX NAME)



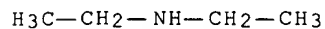
RN 109-86-4 HCAPLUS  
 CN Ethanol, 2-methoxy- (CA INDEX NAME)



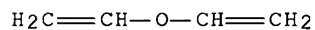
RN 109-87-5 HCAPLUS  
 CN Methane, dimethoxy- (CA INDEX NAME)



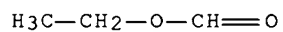
RN 109-89-7 HCAPLUS  
CN Ethanamine, N-ethyl- (CA INDEX NAME)



RN 109-93-3 HCAPLUS  
CN Ethene, 1,1'-oxybis- (9CI) (CA INDEX NAME)



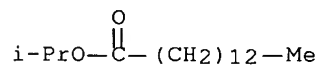
RN 109-94-4 HCAPLUS  
CN Formic acid, ethyl ester (CA INDEX NAME)



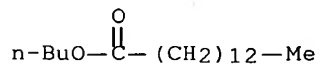
RN 109-99-9 HCAPLUS  
CN Furan, tetrahydro- (CA INDEX NAME)



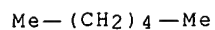
RN 110-27-0 HCAPLUS  
CN Tetradecanoic acid, 1-methylethyl ester (CA INDEX NAME)



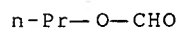
RN 110-36-1 HCAPLUS  
CN Tetradecanoic acid, butyl ester (CA INDEX NAME)



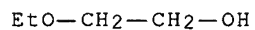
RN 110-54-3 HCAPLUS  
CN Hexane (CA INDEX NAME)



RN 110-74-7 HCAPLUS  
 CN Formic acid, propyl ester (CA INDEX NAME)



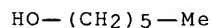
RN 110-80-5 HCAPLUS  
 CN Ethanol, 2-ethoxy- (CA INDEX NAME)



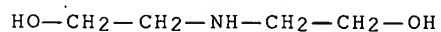
RN 110-82-7 HCAPLUS  
 CN Cyclohexane (CA INDEX NAME)



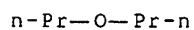
RN 111-27-3 HCAPLUS  
 CN 1-Hexanol (CA INDEX NAME)



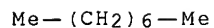
RN 111-42-2 HCAPLUS  
 CN Ethanol, 2,2'-iminobis- (9CI) (CA INDEX NAME)



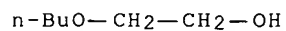
RN 111-43-3 HCAPLUS  
 CN Propane, 1,1'-oxybis- (9CI) (CA INDEX NAME)



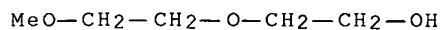
RN 111-65-9 HCAPLUS  
 CN Octane (CA INDEX NAME)



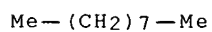
RN 111-76-2 HCAPLUS  
CN Ethanol, 2-butoxy- (CA INDEX NAME)



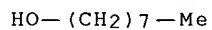
RN 111-77-3 HCAPLUS  
CN Ethanol, 2-(2-methoxyethoxy)- (CA INDEX NAME)



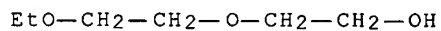
RN 111-84-2 HCAPLUS  
CN Nonane (CA INDEX NAME)



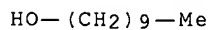
RN 111-87-5 HCAPLUS  
CN 1-Octanol (CA INDEX NAME)



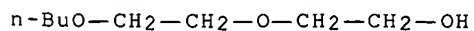
RN 111-90-0 HCAPLUS  
CN Ethanol, 2-(2-ethoxyethoxy)- (CA INDEX NAME)



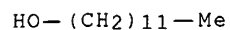
RN 112-30-1 HCAPLUS  
CN 1-Decanol (CA INDEX NAME)



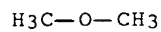
RN 112-34-5 HCAPLUS  
CN Ethanol, 2-(2-butoxyethoxy)- (CA INDEX NAME)



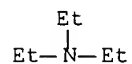
RN 112-53-8 HCAPLUS  
CN 1-Dodecanol (CA INDEX NAME)



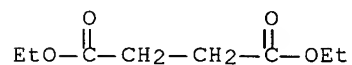
RN 115-10-6 HCAPLUS  
CN Methane, oxybis- (9CI) (CA INDEX NAME)



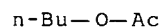
RN 121-44-8 HCAPLUS  
CN Ethanamine, N,N-diethyl- (CA INDEX NAME)



RN 123-25-1 HCAPLUS  
CN Butanedioic acid, diethyl ester (9CI) (CA INDEX NAME)



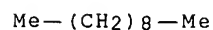
RN 123-86-4 HCAPLUS  
CN Acetic acid, butyl ester (CA INDEX NAME)



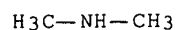
RN 123-91-1 HCAPLUS  
CN 1,4-Dioxane (CA INDEX NAME)



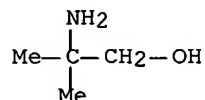
RN 124-18-5 HCAPLUS  
CN Decane (CA INDEX NAME)



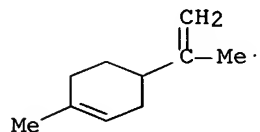
RN 124-40-3 HCAPLUS  
 CN Methanamine, N-methyl- (CA INDEX NAME)



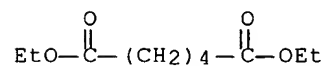
RN 124-68-5 HCAPLUS  
 CN 1-Propanol, 2-amino-2-methyl- (CA INDEX NAME)



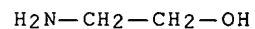
RN 138-86-3 HCAPLUS  
 CN Cyclohexene, 1-methyl-4-(1-methylethenyl)- (CA INDEX NAME)



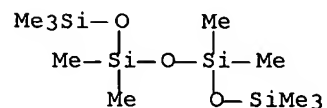
RN 141-28-6 HCAPLUS  
 CN Hexanedioic acid, 1,6-diethyl ester (CA INDEX NAME)



RN 141-43-5 HCAPLUS  
 CN Ethanol, 2-amino- (CA INDEX NAME)

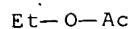


RN 141-62-8 HCAPLUS  
 CN Tetrasiloxane, decamethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)





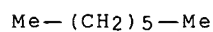
RN 141-78-6 HCAPLUS  
 CN Acetic acid ethyl ester (8CI, 9CI) (CA INDEX NAME)



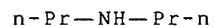
RN 142-68-7 HCAPLUS  
 CN 2H-Pyran, tetrahydro- (CA INDEX NAME)



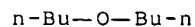
RN 142-82-5 HCAPLUS  
 CN Heptane (CA INDEX NAME)



RN 142-84-7 HCAPLUS  
 CN 1-Propanamine, N-propyl- (CA INDEX NAME)



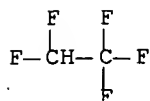
RN 142-96-1 HCAPLUS  
 CN Butane, 1,1'-oxybis- (9CI) (CA INDEX NAME)



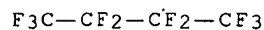
RN 287-92-3 HCAPLUS  
 CN Cyclopentane (8CI, 9CI) (CA INDEX NAME)



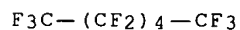
RN 354-33-6 HCAPLUS  
 CN Ethane, pentafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



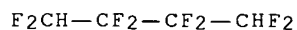
RN 355-25-9 HCAPLUS  
CN Butane, decafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



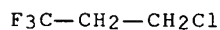
RN 355-42-0 HCAPLUS  
CN Hexane, tetradecafluoro- (6CI, 8CI, 9CI) (CA INDEX NAME)



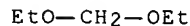
RN 377-36-6 HCAPLUS  
CN Butane, 1,1,2,2,3,3,4,4-octafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



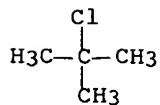
RN 460-35-5 HCAPLUS  
CN Propane, 3-chloro-1,1,1-trifluoro- (CA INDEX NAME)



RN 462-95-3 HCAPLUS  
CN Ethane, 1,1'-[methylenebis(oxy)]bis- (9CI) (CA INDEX NAME)



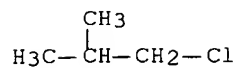
RN 507-20-0 HCAPLUS  
CN Propane, 2-chloro-2-methyl- (CA INDEX NAME)



RN 513-36-0 HCAPLUS

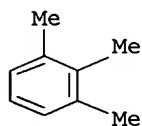
10/507,227

CN Propane, 1-chloro-2-methyl- (CA INDEX NAME)



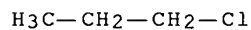
RN 526-73-8 HCAPLUS

CN Benzene, 1,2,3-trimethyl- (CA INDEX NAME)



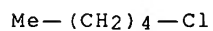
RN 540-54-5 HCAPLUS

CN Propane, 1-chloro- (CA INDEX NAME)



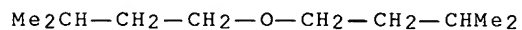
RN 543-59-9 HCAPLUS

CN Pentane, 1-chloro- (CA INDEX NAME)



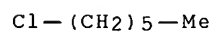
RN 544-01-4 HCAPLUS

CN Butane, 1,1'-oxybis[3-methyl- (9CI) (CA INDEX NAME)



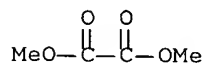
RN 544-10-5 HCAPLUS

CN Hexane, 1-chloro- (CA INDEX NAME)

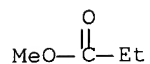


RN 553-90-2 HCAPLUS

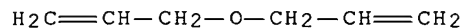
CN Ethanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



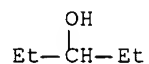
RN 554-12-1 HCAPLUS  
 CN Propanoic acid, methyl ester (CA INDEX NAME)



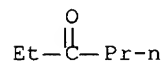
RN 557-40-4 HCAPLUS  
 CN 1-Propene, 3,3'-oxybis- (9CI) (CA INDEX NAME)



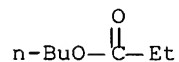
RN 584-02-1 HCAPLUS  
 CN 3-Pentanol (CA INDEX NAME)



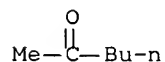
RN 589-38-8 HCAPLUS  
 CN 3-Hexanone (CA INDEX NAME)



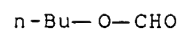
RN 590-01-2 HCAPLUS  
 CN Propanoic acid, butyl ester (CA INDEX NAME)



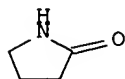
RN 591-78-6 HCAPLUS  
 CN 2-Hexanone (CA INDEX NAME)



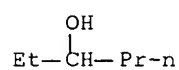
RN 592-84-7 HCAPLUS  
 CN Formic acid, butyl ester (CA INDEX NAME)



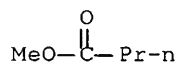
RN 616-45-5 HCAPLUS  
CN 2-Pyrrolidinone (CA INDEX NAME)



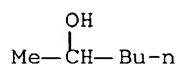
RN 623-37-0 HCAPLUS  
CN 3-Hexanol (CA INDEX NAME)



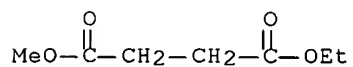
RN 623-42-7 HCAPLUS  
CN Butanoic acid, methyl ester (CA INDEX NAME)



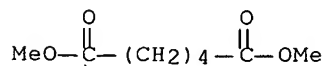
RN 626-93-7 HCAPLUS  
CN 2-Hexanol (CA INDEX NAME)



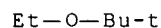
RN 627-73-6 HCAPLUS  
CN Butanedioic acid, ethyl methyl ester (9CI) (CA INDEX NAME)



RN 627-93-0 HCAPLUS  
CN Hexanedioic acid, 1,6-dimethyl ester (CA INDEX NAME)



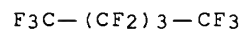
RN 637-92-3 HCAPLUS  
 CN Propane, 2-ethoxy-2-methyl- (CA INDEX NAME)



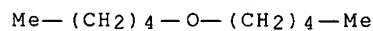
RN 646-06-0 HCAPLUS  
 CN 1,3-Dioxolane (6CI, 8CI, 9CI) (CA INDEX NAME)



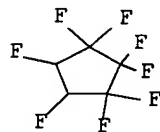
RN 678-26-2 HCAPLUS  
 CN Pentane, dodecafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



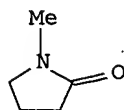
RN 693-65-2 HCAPLUS  
 CN Pentane, 1,1'-oxybis- (9CI) (CA INDEX NAME)



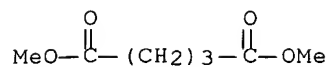
RN 828-35-3 HCAPLUS  
 CN Cyclopentane, 1,1,2,2,3,3,4,5-octafluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 872-50-4 HCAPLUS  
 CN 2-Pyrrolidinone, 1-methyl- (CA INDEX NAME)

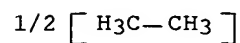


RN 1119-40-0 HCAPLUS  
 CN Pentanedioic acid, dimethyl ester (9CI) (CA INDEX NAME)



RN 1300-21-6 HCAPLUS

CN Ethane, dichloro- (8CI, 9CI) (CA INDEX NAME)



D1-C1

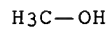
RN 1320-67-8 HCAPLUS

CN Propanol, 1(or 2)-methoxy- (CA INDEX NAME)

CM 1

CRN 67-56-1

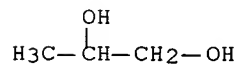
CMF C H4 O



CM 2

CRN 57-55-6

CMF C3 H8 O2



RN 1320-94-1 HCAPLUS

CN Furan, tetrahydrodimethyl- (6CI, 8CI, 9CI) (CA INDEX NAME)



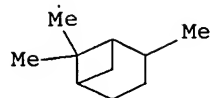
2 (D1-Me)

RN 1330-16-1 HCAPLUS

CN Bicyclo[3.1.1]heptane, 2,6,6-trimethyl-, didehydro deriv. (9CI) (CA INDEX NAME)

CM 1

CRN 473-55-2  
CMF C10 H18



RN 1330-20-7 HCAPLUS  
CN Benzene, dimethyl- (9CI) (CA INDEX NAME)

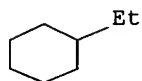


2 ( D1-Me )

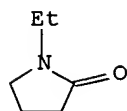
RN 1634-04-4 HCAPLUS  
CN Propane, 2-methoxy-2-methyl- (CA INDEX NAME)

t-Bu-O-Me

RN 1678-91-7 HCAPLUS  
CN Cyclohexane, ethyl- (CA INDEX NAME)

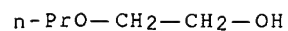


RN 2687-91-4 HCAPLUS  
CN 2-Pyrrolidinone, 1-ethyl- (CA INDEX NAME)



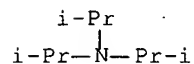
RN 2807-30-9 HCAPLUS  
CN Ethanol, 2-propoxy- (CA INDEX NAME)





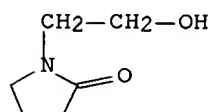
RN 3424-21-3 HCAPLUS

CN 2-Propanamine, N,N-bis(1-methylethyl)- (CA INDEX NAME)



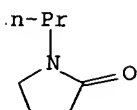
RN 3445-11-2 HCAPLUS

CN 2-Pyrrolidinone, 1-(2-hydroxyethyl)- (CA INDEX NAME)



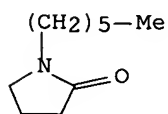
RN 3470-99-3 HCAPLUS

CN 2-Pyrrolidinone, 1-propyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 4838-65-7 HCAPLUS

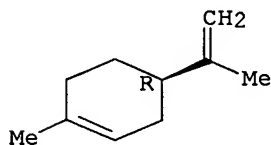
CN 2-Pyrrolidinone, 1-hexyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



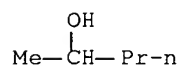
RN 5989-27-5 HCAPLUS

CN Cyclohexene, 1-methyl-4-(1-methylethenyl)-, (4R)- (CA INDEX NAME)

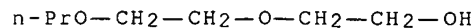
Absolute stereochemistry. Rotation (+).



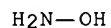
RN 6032-29-7 HCAPLUS  
 CN 2-Pentanol (CA INDEX NAME)



RN 6881-94-3 HCAPLUS  
 CN Ethanol, 2-(2-propoxyethoxy)- (CA INDEX NAME)



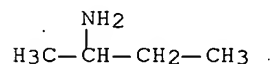
RN 7803-49-8 HCAPLUS  
 CN Hydroxylamine (CA INDEX NAME)



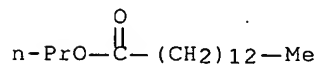
RN 8006-39-1 HCAPLUS  
 CN Terpinol (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

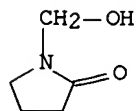
RN 13952-84-6 HCAPLUS  
 CN 2-Butanamine (CA INDEX NAME)



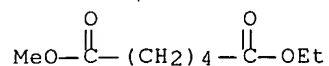
RN 14303-70-9 HCAPLUS  
 CN Tetradecanoic acid, propyl ester (CA INDEX NAME)



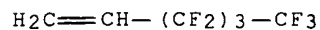
RN 15438-71-8 HCAPLUS  
 CN 2-Pyrrolidinone, 1-(hydroxymethyl)- (CA INDEX NAME)



RN 18891-13-9 HCAPLUS  
 CN Hexanedioic acid, ethyl methyl ester (9CI) (CA INDEX NAME)



RN 19430-93-4 HCAPLUS  
 CN 1-Hexene, 3,3,4,4,5,5,6,6,6-nonafluoro- (CA INDEX NAME)

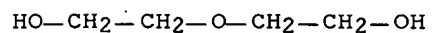


RN 25265-68-3 HCAPLUS  
 CN Furan, tetrahydromethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)



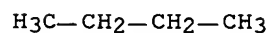
Dl-Me

RN 25265-71-8 HCAPLUS  
 CN Propanol, oxybis- (9CI) (CA INDEX NAME)



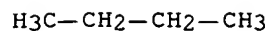
2 ( Dl-Me ).

RN 25265-75-2 HCAPLUS  
 CN Butanediol (CA INDEX NAME)



2 ( Dl-OH )

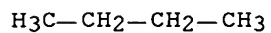
RN 26249-20-7 HCAPLUS  
 CN Butane, epoxy- (8CI, 9CI) (CA INDEX NAME)



D1-O-D1

RN 26447-60-9 HCAPLUS

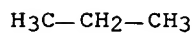
CN Butane, octafluoro- (8CI, 9CI) (CA INDEX NAME)



8 (D1-F)

RN 26638-19-7 HCAPLUS

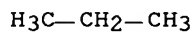
CN Propane, dichloro- (7CI, 8CI, 9CI) (CA INDEX NAME)



2 (D1-Cl)

RN 27070-61-7 HCAPLUS

CN Propane, hexafluoro- (8CI, 9CI) (CA INDEX NAME)



6 (D1-F)

RN 27195-67-1 HCAPLUS

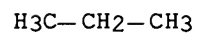
CN Cyclohexane, dimethyl- (8CI, 9CI) (CA INDEX NAME)



2 (D1-Me)

RN 28987-04-4 HCAPLUS

CN Propane, chlorohexafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



D1-Cl

6 ( D1- F )

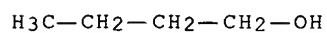
RN 29387-86-8 HCAPLUS

CN Propanol, 1(or 2)-butoxy- (CA INDEX NAME)

CM 1

CRN 71-36-3

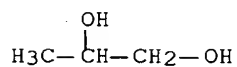
CMF C4 H10 O



CM 2

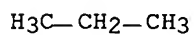
CRN 57-55-6

CMF C3 H8 O2



RN 29470-95-9 HCAPLUS

CN Propane, tetrachlorotrifluoro- (7CI, 8CI, 9CI) (CA INDEX NAME)

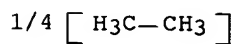


4 ( D1-Cl )

3 ( D1- F )

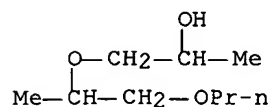
RN 29759-38-4 HCAPLUS

CN Ethane, tetrafluoro- (7CI, 9CI) (CA INDEX NAME)



D1-F

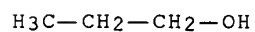
RN 29911-27-1 HCAPLUS  
 CN 2-Propanol, 1-(1-methyl-2-propoxyethoxy)- (CA INDEX NAME)



RN 30136-13-1 HCAPLUS  
 CN Propanol, 1(or 2)-propoxy- (CA INDEX NAME)

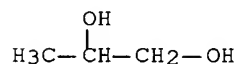
CM 1

CRN 71-23-8  
 CMF C3 H8 O

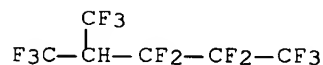


CM 2

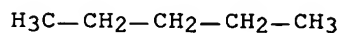
CRN 57-55-6  
 CMF C3 H8 O2



RN 30320-28-6 HCAPLUS  
 CN Pentane, 1,1,1,2,2,3,3,5,5,5-decafluoro-4-(trifluoromethyl)- (8CI, 9CI)  
 (CA INDEX NAME)



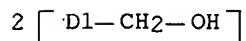
RN 30423-63-3 HCAPLUS  
 CN Pentane, heptafluoro- (8CI, 9CI) (CA INDEX NAME)



7 (D1-F)

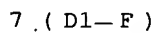
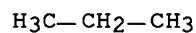
RN 30521-24-5 HCAPLUS

CN Furandimethanol, tetrahydro- (7CI, 8CI, 9CI) (CA INDEX NAME)



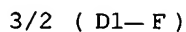
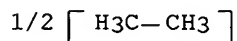
RN 33660-75-2 HCAPLUS

CN Propane, heptafluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



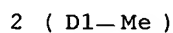
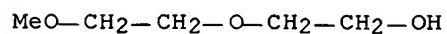
RN 34077-87-7 HCAPLUS

CN Ethane, dichlorotrifluoro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



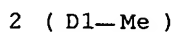
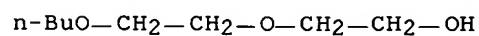
RN 34590-94-8 HCAPLUS

CN Propanol, 1(or 2)-(2-methoxymethylethoxy)- (9CI) (CA INDEX NAME)

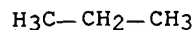


RN 35884-42-5 HCAPLUS

CN Propanol, 1(or 2)-(2-butoxymethylethoxy)- (CA INDEX NAME)

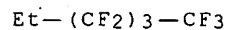


RN 37145-47-4 HCAPLUS  
CN Propane, pentafluoro- (9CI) (CA INDEX NAME)

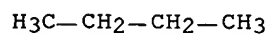


5 ( D1-F )

RN 38436-17-8 HCAPLUS  
CN Hexane, 1,1,1,2,2,3,3,4,4-nonafluoro- (9CI) (CA INDEX NAME)

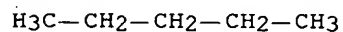


RN 38719-68-5 HCAPLUS  
CN Butane, dimethyl- (9CI) (CA INDEX NAME)



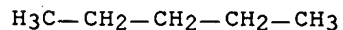
2 ( D1-Me )

RN 43133-95-5 HCAPLUS  
CN Pentane, methyl- (9CI) (CA INDEX NAME)



D1-Me

RN 51000-94-3 HCAPLUS  
CN Pentane, decafluoro- (9CI) (CA INDEX NAME)



10 ( D1-F )

RN 51001-25-3 HCAPLUS  
CN 2H-Pyran, tetrahydromethyl- (9CI) (CA INDEX NAME)

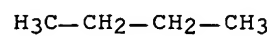




D1-Me

RN 55949-54-7 HCAPLUS

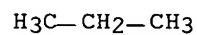
CN Butane, nonafluoro- (6CI, 7CI, 9CI) (CA INDEX NAME)



9 ( D1-F )

RN 61623-04-9 HCAPLUS

CN Propane, trichlorotrifluoro- (9CI) (CA INDEX NAME)

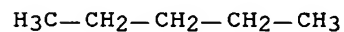


3 ( D1-Cl )

3 ( D1-F )

RN 72923-37-6 HCAPLUS

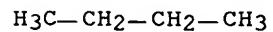
CN Pentane, octafluoro- (9CI) (CA INDEX NAME)



8 ( D1-F )

RN 74469-62-8 HCAPLUS

CN Butane, hexafluoro- (9CI) (CA INDEX NAME)



6 ( D1-F )

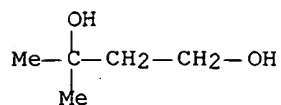
RN 76083-84-6 HCAPLUS

CN Butanol, methoxymethyl- (9CI) (CA INDEX NAME)

CM 1

CRN 2568-33-4

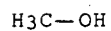
CMF C5 H12 O2



CM 2

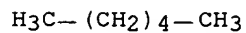
CRN 67-56-1

CMF C H4 O



RN 86498-66-0 HCAPLUS

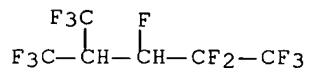
CN Hexane, dodecafluoro- (9CI) (CA INDEX NAME)



12 ( D1-F )

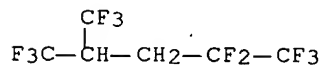
RN 90278-00-5 HCAPLUS

CN Pentane, 1,1,1,2,2,3,5,5,5-nonafluoro-4-(trifluoromethyl)- (9CI) (CA INDEX NAME)



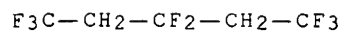
RN 90278-01-6 HCAPLUS

CN Pentane, 1,1,1,2,2,5,5,5-octafluoro-4-(trifluoromethyl)- (9CI) (CA INDEX NAME)

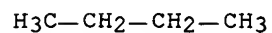


RN 102526-10-3 HCAPLUS

CN Pentane, 1,1,1,3,3,5,5,5-octafluoro- (9CI) (CA INDEX NAME)

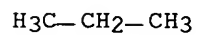


RN 116866-99-0 HCAPLUS  
CN Butane, heptafluoro- (9CI) (CA INDEX NAME)



7 ( D1-F )

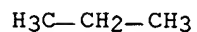
RN 127564-83-4 HCAPLUS  
CN Propane, dichlorotetrafluoro- (9CI) (CA INDEX NAME)



2 ( D1-Cl )

4 ( D1-F )

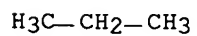
RN 127564-91-4 HCAPLUS  
CN Propane, trichlorotetrafluoro- (9CI) (CA INDEX NAME)



3 ( D1-Cl )

4 ( D1-F )

RN 127564-92-5 HCAPLUS  
CN Propane, dichloropentafluoro- (9CI) (CA INDEX NAME)



2 ( D1-Cl )

5 ( D1-F )

RN 133452-70-7 HCAPLUS

CN Hexane, tridecafluoro- (9CI) (CA INDEX NAME)

Me—(CH<sub>2</sub>)<sub>4</sub>—Me

13 ( D1— F )

RN 134190-50-4 HCAPLUS

CN Propane, chlorotetrafluoro- (9CI) (CA INDEX NAME)

H<sub>3</sub>C—CH<sub>2</sub>—CH<sub>3</sub>

D1—Cl

4 ( D1— F )

RN 134237-36-8 HCAPLUS

CN Propane, pentachlorodifluoro- (9CI) (CA INDEX NAME)

H<sub>3</sub>C—CH<sub>2</sub>—CH<sub>3</sub>

5 ( D1—Cl )

2 ( D1— F )

RN 134237-41-5 HCAPLUS

CN Propane, chloropentafluoro- (9CI) (CA INDEX NAME)

H<sub>3</sub>C—CH<sub>2</sub>—CH<sub>3</sub>

D1—Cl

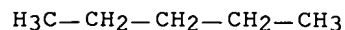
5 ( D1— F )

RN 138495-42-8 HCAPLUS

CN Pentane, 1,1,1,2,2,3,4,5,5,5-decafluoro- (CA INDEX NAME)

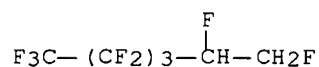
$$\begin{array}{c} \text{F} \quad \text{F} \\ | \quad | \\ \text{F}_3\text{C}-\text{CF}_2-\text{CH}-\text{CH}-\text{CF}_3 \end{array}$$

RN 139063-93-7 HCAPLUS  
 CN Pentane, undecafluoro- (9CI) (CA INDEX NAME)

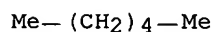


11 ( D1-F )

RN 148565-53-1 HCAPLUS  
 CN Hexane, 1,1,1,2,2,3,3,4,4,5,6-undecafluoro- (9CI) (CA INDEX NAME)

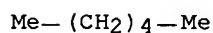


RN 154275-17-9 HCAPLUS  
 CN Hexane, undecafluoro- (9CI) (CA INDEX NAME)



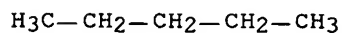
11 ( D1-F )

RN 154275-19-1 HCAPLUS  
 CN Hexane, octafluoro- (9CI) (CA INDEX NAME)



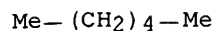
8 ( D1-F )

RN 154275-56-6 HCAPLUS  
 CN Pentane, nonafluoro- (9CI) (CA INDEX NAME)



9 ( D1-F )

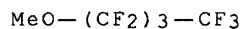
RN 155072-58-5 HCAPLUS  
 CN Hexane, decafluoro- (9CI) (CA INDEX NAME)



10 ( D1-F )

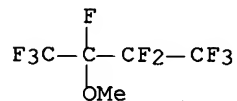
RN 163702-07-6 HCAPLUS

CN Butane, 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy- (CA INDEX NAME)



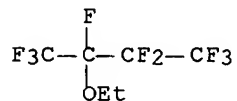
RN 186493-81-2 HCAPLUS

CN Butane, 1,1,1,2,2,3,3,4,4-nonafluoro-3-methoxy- (9CI) (CA INDEX NAME)



RN 186493-83-4 HCAPLUS

CN Butane, 2-ethoxy-1,1,1,2,3,3,4,4,4-nonafluoro- (9CI) (CA INDEX NAME)



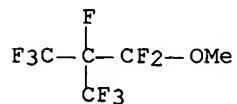
RN 219484-64-7 HCAPLUS

CN Butane, 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxy-, mixt. with  
2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane (CA INDEX NAME)

CM 1

CRN 163702-08-7

CMF C5 H3 F9 O



CM 2

CRN 163702-07-6

CMF C5 H3 F9 O

MeO—(CF<sub>2</sub>)<sub>3</sub>—CF<sub>3</sub>

RN 519154-84-8 HCAPLUS

CN 2H-Pyran, tetrahydrodimethyl- (9CI) (CA INDEX NAME)



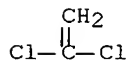
2 (D1-Me)

IT 75-35-4, 1,1-Dichloroethylene, uses 156-59-2,  
 1,2-cis-Dichloroethylene 156-60-5, 1,2-trans-Dichloroethylene  
 25323-30-2, Dichloroethylene 163702-05-4, Novec HFE 7200  
 631897-30-8 631897-31-9

RL: TEM (Technical or engineered material use); USES (Uses)  
 (cleaning compns. containing dichloroethylene and alkoxy substituted  
 perfluoro compds. having six carbon atoms)

RN 75-35-4 HCAPLUS

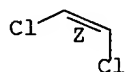
CN Ethene, 1,1-dichloro- (CA INDEX NAME)



RN 156-59-2 HCAPLUS

CN Ethene, 1,2-dichloro-, (1Z)- (9CI) (CA INDEX NAME)

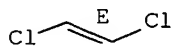
Double bond geometry as shown.



RN 156-60-5 HCAPLUS

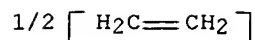
CN Ethene, 1,2-dichloro-, (1E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 25323-30-2 HCAPLUS

CN Ethene, dichloro- (9CI) (CA INDEX NAME)



D1—Cl

RN 163702-05-4 HCAPLUS

CN Butane, 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluoro- (CA INDEX NAME)

EtO—(CF<sub>2</sub>)<sub>3</sub>—CF<sub>3</sub>

RN 631897-30-8 HCAPLUS

CN Butane, ethoxynonafluoro- (9CI) (CA INDEX NAME)

H<sub>3</sub>C—CH<sub>2</sub>—CH<sub>2</sub>—CH<sub>3</sub>

D1—O—Et

9 ( D1—F )

RN 631897-31-9 HCAPLUS

CN Pentane, undecafluoromethoxy- (9CI) (CA INDEX NAME)

H<sub>3</sub>C—CH<sub>2</sub>—CH<sub>2</sub>—CH<sub>2</sub>—CH<sub>3</sub>

D1—O—Me

11 ( D1—F )

L38 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:690493 HCAPLUS Full-text

DOCUMENT NUMBER: 136:41762

TITLE: National Emission Standards for Hazardous Air  
Pollutants for Boat ManufacturingCORPORATE SOURCE: EPA, U.S. EPA Air and Radiation Docket and Information  
Center, Washington, DC, 20460, USASOURCE: Federal Register (2001), 66(163), 44217-44250, 22 Aug  
2001

CODEN: FEREAC; ISSN: 0097-6326

PUBLISHER: Superintendent of Documents

DOCUMENT TYPE: Journal

LANGUAGE: English

AB This action promulgates national emission stds. for hazardous air pollutants  
(NESHAP) for new and existing boat manufacturing facilities. The **processes**



regulated include fiberglass **resin** and gel coat operations, carpet and fabric adhesive operations, and Al recreational boat painting operations. The EPA has identified boat manufacturing as a major source of hazardous air pollutants (HAP), such as styrene, Me methacrylate (MMA), **methylene chloride**, toluene, xylene, n-hexane, MEK, MIBK, and 1,1,1-trichloroethane. The NESHAP will implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources to meet HAP emission stds. reflecting the application of the maximum achievable control technol. (MACT). We estimate the final NESHAP will reduce nationwide emissions by HAP from these facilities by 3450 tons/yr (.apprx.35% from the 1997 level of emissions).

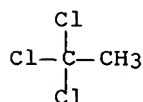
IT 71-55-6, Methyl chloroform 75-09-2, **Methylene chloride**, occurrence 78-93-3, Methyl ethyl ketone, occurrence 80-62-6, Methyl methacrylate 91-20-3, Naphthalene, occurrence 98-82-8, **Cumene** 100-41-4, Ethylbenzene, occurrence 100-42-5, Styrene, occurrence 108-10-1, Methyl isobutyl ketone 108-88-3, Toluene, occurrence 110-54-3, n-Hexane, occurrence 1330-20-7, Xylene, occurrence

RL: POL (Pollutant); OCCU (Occurrence)

(National Emission Stds. for Hazardous Air Pollutants for Boat Manufacturing)

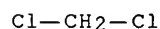
RN 71-55-6 HCAPLUS

CN Ethane, 1,1,1-trichloro- (CA INDEX NAME)



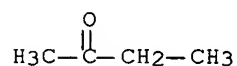
RN 75-09-2 HCAPLUS

CN Methane, dichloro- (CA INDEX NAME)



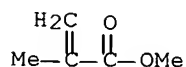
RN 78-93-3 HCAPLUS

CN 2-Butanone (CA INDEX NAME)



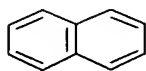
RN 80-62-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester (CA INDEX NAME)



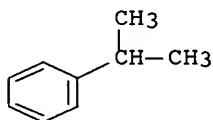
RN 91-20-3 HCAPLUS

CN Naphthalene (CA INDEX NAME)



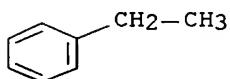
RN 98-82-8 HCAPLUS

CN Benzene, (1-methylethyl)- (CA INDEX NAME)



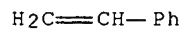
RN 100-41-4 HCAPLUS

CN Benzene, ethyl- (CA INDEX NAME)



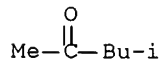
RN 100-42-5 HCAPLUS

CN Benzene, ethenyl- (CA INDEX NAME)



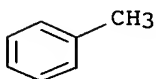
RN 108-10-1 HCAPLUS

CN 2-Pentanone, 4-methyl- (CA INDEX NAME)



RN 108-88-3 HCAPLUS

CN Benzene, methyl- (CA INDEX NAME)



RN 110-54-3 HCAPLUS

CN Hexane (CA INDEX NAME)

Me-(CH<sub>2</sub>)<sub>4</sub>-Me

RN 1330-20-7 HCAPLUS  
 CN Benzene, dimethyl- (9CI) (CA INDEX NAME)



2 (D1-Me)

L38 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2001:185616 HCAPLUS Full-text  
 DOCUMENT NUMBER: 134:242720  
 TITLE: Graft polymerization of substrate surfaces for medical devices  
 INVENTOR(S): Wang, Guo-bin; Zhang, Xianping  
 PATENT ASSIGNEE(S): Sts Biopolymers, Inc., USA  
 SOURCE: PCT Int. Appl., 41 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001017575	A1	20010315	WO 2000-US21370	20000804
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6358557	B1	20020319	US 1999-394577	19990910
EP 1214107	A1	20020619	EP 2000-952530	20000804
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003510378	T	20030318	JP 2001-521362	20000804
US 2002133072	A1	20020919	US 2001-35561	20011107
PRIORITY APPLN. INFO.:			US 1999-394577	A 19990910
			WO 2000-US21370	W 20000804
AB The invention includes a method of coating a substrate, comprising exposing a substrate to an initiator capable of initiating a graft polymerization <b>reaction</b> on the substrate, to generate <b>reactive</b> radical sites on the surface of the substrate; contacting the substrate with a composition comprising one or more monomers in a medium which has different hydrophilicity compared to				

the substrate, and grafting monomer mols. onto the substrate by forming covalent bonds between monomer mols. and the substrate at **reactive** radical sites on the substrate surface. With the invention, novel coated articles can be obtained which are particularly useful as medical products such as catheters. Silicone tubings were treated by standard dip-coating in 8% benzoyl peroxide in THF for 30 s, then were air dried. The tubing were then placed in an aqueous solution comprising N,N-dimethylacrylamide 3.9, acrylamide 0.19, diacrylate crosslinker 0.25, sodium chloride 15, and polyvinylpyrrolidone 2.0%, then heated for 3 h at 87° under vacuum. The coating was strongly adherent to the substrate and decreased the coefficient of friction to 6.8% of the original coefficient

IT 9010-79-1, Ethylene propylene copolymer

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(fluorinated; graft polymerization of substrate surfaces for medical devices)

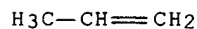
RN 9010-79-1 HCAPLUS

CN 1-Propene, polymer with ethene (CA INDEX NAME)

CM 1

CRN 115-07-1

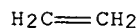
CMF C3 H6



CM 2

CRN 74-85-1

CMF C2 H4



IT 1406-05-9, Penicillin 6998-60-3, Rifamycin

7440-22-4D, Silver, derivs., biological studies 11111-12-9

, Cephalosporin 146615-63-6D, derivs.

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(graft polymerization of substrate surfaces for medical devices)

RN 1406-05-9 HCAPLUS

CN Penicillin (CA INDEX NAME)

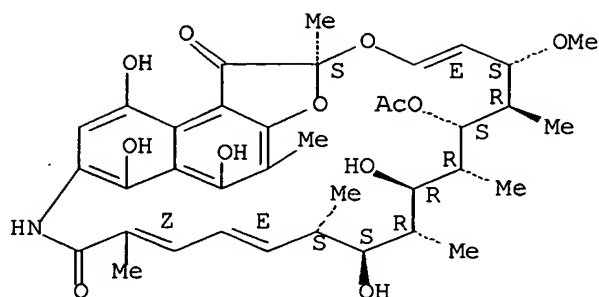
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 6998-60-3 HCAPLUS

CN Rifamycin (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Double bond geometry as described by E or Z.



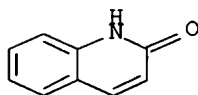
RN 7440-22-4 HCAPLUS  
CN Silver (CA INDEX NAME)

Ag

RN 11111-12-9 HCAPLUS  
CN Cephalosporin (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 146615-63-6 HCAPLUS  
CN 2(1H)-Quinolinone, fluoro- (9CI) (CA INDEX NAME)



D1-F

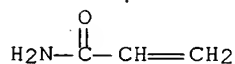
IT 79-06-1D, Acrylamide, **reaction** products with silicones 79-38-9, Chlorotrifluoroethylene 88-12-0D, **reaction** products with silicones 108-31-6, Maleic anhydride, biological studies 2680-03-7D, N,N-Dimethylacrylamide, **reaction** products with silicones 9002-84-0, Polytetrafluoroethylene 9002-88-4, Polyethylene 9002-89-5, Polyvinyl alcohol 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 9003-07-0, Polypropylene 9003-09-2, Polyvinyl methyl ether 9003-17-2, Polybutadiene 9003-18-3, Butadiene acrylonitrile copolymer 9003-20-7, Polyvinyl acetate 9003-27-4, Polyisobutylene 9003-31-0, Polyisoprene 9003-32-1, Polyethylacrylate 9003-39-8, Polyvinylpyrrolidone 9003-42-3, Polyethylmethacrylate 9003-47-8, Polyvinyl pyridine 9003-53-6, Polystyrene 9003-55-8, Butadiene styrene copolymer 9004-34-6, Cellulose, biological studies 9004-34-6D, Cellulose, modified, biological studies 9005-25-8, Starch, biological studies 9010-85-9, Isobutylene isoprene copolymer 9010-98-4, Polychloroprene 9011-14-7, Polymethylmethacrylate 24981-14-4, Polyvinyl fluoride 25014-41-9,

Polyacrylonitrile 25035-04-5, Nylon 11 25038-54-4,  
 Nylon 6, biological studies 25087-26-7, Polymethacrylic acid  
 25587-80-8 25721-76-0, Polyethylene glycol  
 dimethacrylate 25736-86-1, Polyethylene glycol methacrylate  
 25852-49-7, Polypropylene glycol dimethacrylate 26099-09-2  
 , Polymaleic acid 26403-58-7, Polyethylene glycol acrylate  
 26403-58-7D, Polyethylene glycol acrylate, reaction  
 products with silicones 26970-31-0, Nylon 10 28158-16-9  
 , Poly(ethylene glycol diacrylate) 32131-17-2, Nylon 66,  
 biological studies 52501-13-0, Polyvinyl ketone  
 58856-72-7, Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha$ -hydro-  
 $\omega$ -hydroxy-, 2-propenoate 62851-97-2, Polypropylene glycol  
 methacrylate 329897-96-3, Poly 2-hydroxyethyl fumarate  
 RL: DEV (Device component use); PEP (Physical, engineering or chemical  
 process); THU (Therapeutic use); BIOL (Biological study); PROC (Process);  
 USES (Uses)

(graft polymerization of substrate surfaces for medical devices)

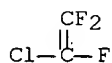
RN 79-06-1 HCAPLUS

CN 2-Propenamide (CA INDEX NAME)



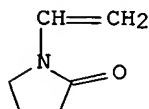
RN 79-38-9 HCAPLUS

CN Ethene, chlorotrifluoro- (9CI) (CA INDEX NAME)



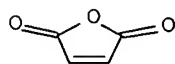
RN 88-12-0 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl- (CA INDEX NAME)



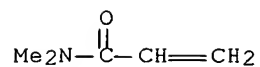
RN 108-31-6 HCAPLUS

CN 2,5-Furandione (CA INDEX NAME)

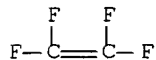


RN 2680-03-7 HCAPLUS

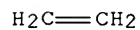
CN 2-Propenamide, N,N-dimethyl- (CA INDEX NAME)



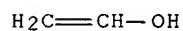
RN 9002-84-0 HCAPLUS  
 CN Ethene, 1,1,2,2-tetrafluoro-, homopolymer (CA INDEX NAME)  
 CM 1  
 CRN 116-14-3  
 CMF C2 F4



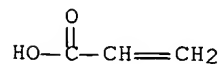
RN 9002-88-4 HCAPLUS  
 CN Ethene, homopolymer (CA INDEX NAME)  
 CM 1  
 CRN 74-85-1  
 CMF C2 H4



RN 9002-89-5 HCAPLUS  
 CN Ethenol, homopolymer (CA INDEX NAME)  
 CM 1  
 CRN 557-75-5  
 CMF C2 H4 O



RN 9003-01-4 HCAPLUS  
 CN 2-Propenoic acid, homopolymer (CA INDEX NAME)  
 CM 1  
 CRN 79-10-7  
 CMF C3 H4 O2

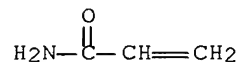


10/507,227

RN 9003-05-8 HCAPLUS  
CN 2-Propenamide, homopolymer (CA INDEX NAME)

CM 1

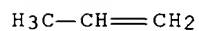
CRN 79-06-1  
CMF C3 H5 N O



RN 9003-07-0 HCAPLUS  
CN 1-Propene, homopolymer (CA INDEX NAME)

CM 1

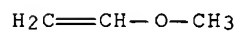
CRN 115-07-1  
CMF C3 H6



RN 9003-09-2 HCAPLUS  
CN Ethene, methoxy-, homopolymer (CA INDEX NAME)

CM 1

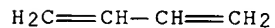
CRN 107-25-5  
CMF C3 H6 O



RN 9003-17-2 HCAPLUS  
CN 1,3-Butadiene, homopolymer (CA INDEX NAME)

CM 1

CRN 106-99-0  
CMF C4 H6



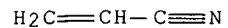
RN 9003-18-3 HCAPLUS  
CN 2-Propenenitrile, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 107-13-1



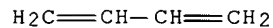
CMF C3 H3 N



CM 2

CRN 106-99-0

CMF C4 H6



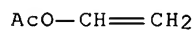
RN 9003-20-7 HCAPLUS

CN Acetic acid ethenyl ester, homopolymer (CA INDEX NAME)

CM 1

CRN 108-05-4

CMF C4 H6 O2



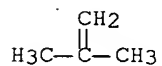
RN 9003-27-4 HCAPLUS

CN 1-Propene, 2-methyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 115-11-7

CMF C4 H8



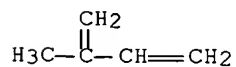
RN 9003-31-0 HCAPLUS

CN 1,3-Butadiene, 2-methyl-, homopolymer (CA INDEX NAME)

CM 1

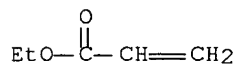
CRN 78-79-5

CMF C5 H8

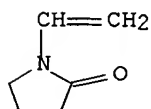


10/507,227

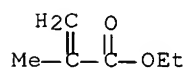
RN 9003-32-1 HCAPLUS  
CN 2-Propenoic acid, ethyl ester, homopolymer (CA INDEX NAME)  
CM 1  
CRN 140-88-5  
CMF C5 H8 O2



RN 9003-39-8 HCAPLUS  
CN 2-Pyrrolidinone, 1-ethenyl-, homopolymer (CA INDEX NAME)  
CM 1  
CRN 88-12-0  
CMF C6 H9 N O



RN 9003-42-3 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, ethyl ester, homopolymer (CA INDEX NAME)  
CM 1  
CRN 97-63-2  
CMF C6 H10 O2



RN 9003-47-8 HCAPLUS  
CN Pyridine, ethenyl-, homopolymer (9CI) (CA INDEX NAME)  
CM 1  
CRN 1337-81-1  
CMF C7 H7 N  
CCI IDS



D1-CH=CH<sub>2</sub>

RN 9003-53-6 HCAPLUS  
 CN Benzene, ethenyl-, homopolymer (CA INDEX NAME)  
 CM 1  
 CRN 100-42-5  
 CMF C8 H8

H<sub>2</sub>C=CH-Ph

RN 9003-55-8 HCAPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)  
 CM 1  
 CRN 106-99-0  
 CMF C4 H6

H<sub>2</sub>C=CH-CH=CH<sub>2</sub>

CM 2  
 CRN 100-42-5  
 CMF C8 H8

H<sub>2</sub>C=CH-Ph

RN 9004-34-6 HCAPLUS  
 CN Cellulose (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9004-34-6 HCAPLUS  
 CN Cellulose (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9005-25-8 HCAPLUS  
 CN Starch (CA INDEX NAME)

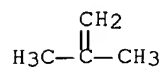
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9010-85-9 HCAPLUS  
 CN 1,3-Butadiene, 2-methyl-, polymer with 2-methyl-1-propene (CA INDEX NAME)

CM 1

CRN 115-11-7

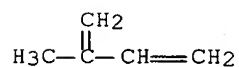
CMF C4 H8



CM 2

CRN 78-79-5

CMF C5 H8



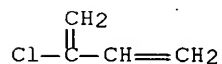
RN 9010-98-4 HCAPLUS

CN 1,3-Butadiene, 2-chloro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 126-99-8

CMF C4 H5 Cl



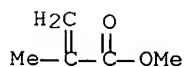
RN 9011-14-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, homopolymer (CA INDEX NAME)

CM 1

CRN 80-62-6

CMF C5 H8 O2



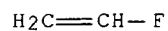
RN 24981-14-4 HCAPLUS

CN Ethene, fluoro-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 75-02-5

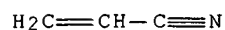
CMF C2 H3 F



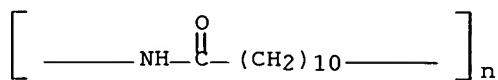
RN 25014-41-9 HCAPLUS  
 CN 2-Propenenitrile, homopolymer (9CI) (CA INDEX NAME)

CM 1

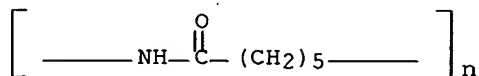
CRN 107-13-1  
 CMF C3 H3 N



RN 25035-04-5 HCAPLUS  
 CN Poly[imino(1-oxo-1,11-undecanediyl)] (CA INDEX NAME)



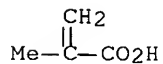
RN 25038-54-4 HCAPLUS  
 CN Poly[imino(1-oxo-1,6-hexanediyl)] (CA INDEX NAME)



RN 25087-26-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4  
 CMF C4 H6 O2



RN 25587-80-8 HCAPLUS  
 CN Undecanoic acid, 11-amino-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 2432-99-7

CMF C11 H23 N O2

 $\text{HO}_2\text{C}-(\text{CH}_2)_{10}-\text{NH}_2$ 

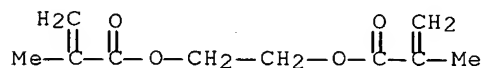
RN 25721-76-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, homopolymer (9CI) (CA INDEX NAME)

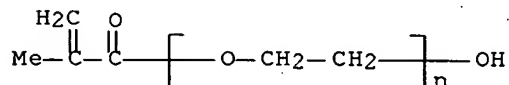
CM 1

CRN 97-90-5

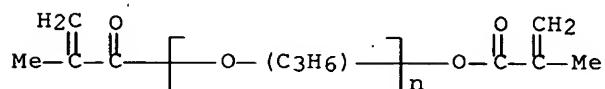
CMF C10 H14 O4



RN 25736-86-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]- $\omega$ -hydroxy- (CA INDEX NAME)

RN 25852-49-7 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha$ -(2-methyl-1-oxo-2-propen-1-yl)- $\omega$ -[(2-methyl-1-oxo-2-propen-1-yl)oxy]- (CA INDEX NAME)

RN 26099-09-2 HCAPLUS

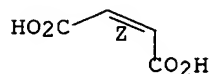
CN 2-Butenedioic acid (2Z)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

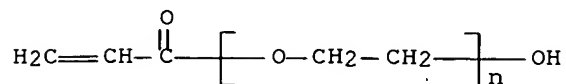
CRN 110-16-7

CMF C4 H4 O4

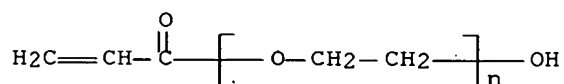
Double bond geometry as shown.



RN 26403-58-7 HCAPLUS

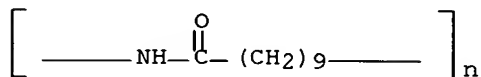
CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -hydroxy-  
(9CI) (CA INDEX NAME)

RN 26403-58-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(1-oxo-2-propenyl)- $\omega$ -hydroxy-  
(9CI) (CA INDEX NAME)

RN 26970-31-0 HCAPLUS

CN Poly[imino(1-oxo-1,10-decanediyl)] (CA INDEX NAME)



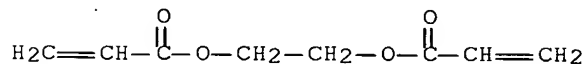
RN 28158-16-9 HCAPLUS

CN 2-Propenoic acid, 1,2-ethanediyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

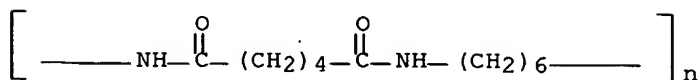
CRN 2274-11-5

CMF C8 H10 O4



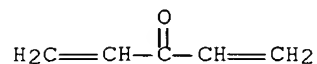
RN 32131-17-2 HCAPLUS

CN Poly[imino(1,6-dioxo-1,6-hexanediyl)imino-1,6-hexanediyl] (CA INDEX NAME)

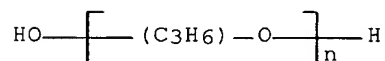


10/507,227

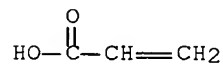
RN 52501-13-0 HCAPLUS  
CN 1,4-Pentadien-3-one, homopolymer (9CI) (CA INDEX NAME)  
CM 1  
CRN 1890-28-4  
CMF C5 H6 O



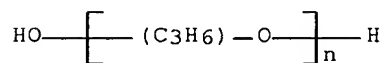
RN 58856-72-7 HCAPLUS  
CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha$ -hydro- $\omega$ -hydroxy-,  
2-propenoate (9CI) (CA INDEX NAME)  
CM 1  
CRN 25322-69-4  
CMF (C3 H6 O)<sub>n</sub> H2 O  
CCI IDS, PMS



CM 2  
CRN 79-10-7  
CMF C3 H4 O2

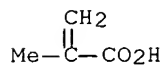


RN 62851-97-2 HCAPLUS  
CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha$ -hydro- $\omega$ -hydroxy-,  
2-methyl-2-propenoate (9CI) (CA INDEX NAME)  
CM 1  
CRN 25322-69-4  
CMF (C3 H6 O)<sub>n</sub> H2 O  
CCI IDS, PMS





CM 2

CRN 79-41-4  
CMF C4 H6 O2

RN 329897-96-3 HCAPLUS  
CN 2-Butenedioic acid (2E)-, 2-hydroxyethyl ester, homopolymer (9CI) (CA INDEX NAME)

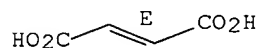
CM 1

CRN 329897-95-2  
CMF C4 H4 O4 . x C2 H6 O2

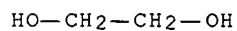
CM 2

CRN 110-17-8  
CMF C4 H4 O4

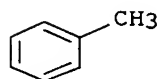
Double bond geometry as shown.



CM 3

CRN 107-21-1  
CMF C2 H6 O2

IT 108-88-3, Toluene, uses 109-99-9, Tetrahydrofuran, uses  
110-54-3, Hexane, uses 110-82-7, Cyclohexane, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(graft polymerization of substrate surfaces for medical devices)  
RN 108-88-3 HCAPLUS  
CN Benzene, methyl- (CA INDEX NAME)



RN 109-99-9 HCAPLUS  
CN Furan, tetrahydro- (CA INDEX NAME)



RN 110-54-3 HCAPLUS  
CN Hexane (CA INDEX NAME)

Me-(CH<sub>2</sub>)<sub>4</sub>-Me

RN 110-82-7 HCAPLUS  
CN Cyclohexane (CA INDEX NAME)

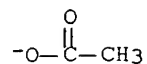


IT 71-50-1, Acetate ion, **reactions** 74-80-6, Amyl hydroperoxide 77-77-0, Divinyl sulfone 78-67-1, Azobisisobutyronitrile 80-15-9, **Cumene hydroperoxide** 80-43-3 94-36-0, Benzoyl peroxide, **reactions** 105-74-8, Lauroyl peroxide 107-71-1, tert-Butyl peroxyacetate 119-61-9, Benzophenone, **reactions** 119-61-9D, Benzophenone, derivs. 614-45-9, tert-Butyl perbenzoate 690-83-5, tert-Amyl peroxyacetate 762-12-9, Decanoyl peroxide 927-07-1 981-18-0 1321-74-0, Divinylbenzene, **reactions** 2867-47-2, Dimethylaminoethyl methacrylate 3006-82-4, tert-Butyl peroxy-2-ethylhexanoate 3006-86-8 3236-56-4 3290-92-4 3849-34-1, Dibutyl peroxide 3903-88-6, Diamyl peroxide 4511-39-1, tert-Amyl perbenzoate 4813-50-7, Butyl hydroperoxide 4986-89-4 5676-79-9 6731-36-8 7722-84-1, Hydrogen peroxide, **reactions** 7727-21-1, Potassium persulfate 10373-78-1, Camphorquinone 13052-09-0 14265-44-2, Phosphate, **reactions** 14798-03-9, Ammonium ion, **reactions** 15618-65-2 15625-89-5, Trimethylolpropane triacrylate 15667-10-4 16186-97-3 16887-00-6, Chloride ion, **reactions** 17341-25-2, Sodium ion, **reactions** 17397-01-2 24203-36-9, Potassium ion, **reactions** 26748-41-4, tert-Butyl peroxyneodecanoate 26748-47-0, α-Cumyl peroxyneodecanoate 29240-17-3 34099-48-4, Peroxydicarbonate 34443-12-4 55794-20-2 67567-23-1 68299-16-1, tert-Amyl peroxyneodecanoate 94108-97-1 95718-78-8 130097-36-8, α-Cumyl peroxyneohexanoate 329897-06-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(graft polymerization of substrate surfaces for medical devices)

RN 71-50-1 HCAPLUS

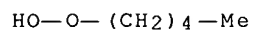
10/507,227

CN Acetic acid, ion(1-) (8CI, 9CI) (CA INDEX NAME)



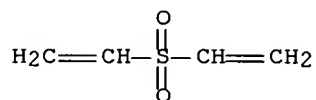
RN 74-80-6 HCAPLUS

CN Hydroperoxide, pentyl (9CI) (CA INDEX NAME)



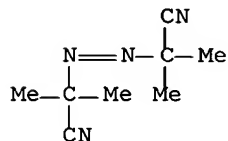
RN 77-77-0 HCAPLUS

CN Ethene, 1,1'-sulfonylbis- (9CI) (CA INDEX NAME)



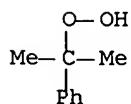
RN 78-67-1 HCAPLUS

CN Propanenitrile, 2,2'-azobis[2-methyl- (9CI) (CA INDEX NAME)



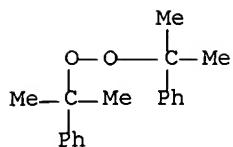
RN 80-15-9 HCAPLUS

CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)

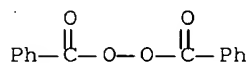


RN 80-43-3 HCAPLUS

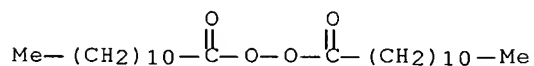
CN Peroxide, bis(1-methyl-1-phenylethyl) (9CI) (CA INDEX NAME)



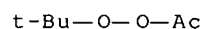
RN 94-36-0 HCAPLUS  
 CN Peroxide, dibenzoyl (9CI) (CA INDEX NAME)



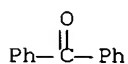
RN 105-74-8 HCAPLUS  
 CN Peroxide, bis(1-oxododecyl) (9CI) (CA INDEX NAME)



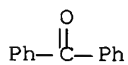
RN 107-71-1 HCAPLUS  
 CN Ethaneperoxoic acid, 1,1-dimethylethyl ester (CA INDEX NAME)



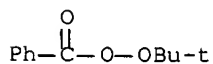
RN 119-61-9 HCAPLUS  
 CN Methanone, diphenyl- (9CI) (CA INDEX NAME)



RN 119-61-9 HCAPLUS  
 CN Methanone, diphenyl- (9CI) (CA INDEX NAME)

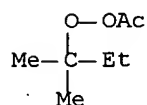


RN 614-45-9 HCAPLUS  
 CN Benzenecarboperoxoic acid, 1,1-dimethylethyl ester (CA INDEX NAME)



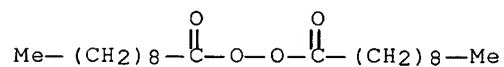
RN 690-83-5 HCAPLUS

CN Ethaneperoxoic acid, 1,1-dimethylpropyl ester (9CI) (CA INDEX NAME)



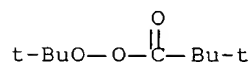
RN 762-12-9 HCAPLUS

CN Peroxide, bis(1-oxodecyl) (9CI) (CA INDEX NAME)



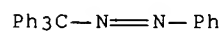
RN 927-07-1 HCAPLUS

CN Propaneperoxoic acid, 2,2-dimethyl-, 1,1-dimethylethyl ester (CA INDEX NAME)



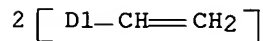
RN 981-18-0 HCAPLUS

CN Diazene, phenyl(triphenylmethyl)- (9CI) (CA INDEX NAME)



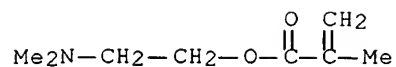
RN 1321-74-0 HCAPLUS

CN Benzene, diethenyl- (9CI) (CA INDEX NAME)



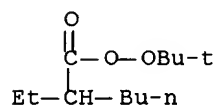
RN 2867-47-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester (CA INDEX NAME)



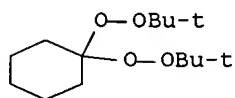
RN 3006-82-4 HCAPLUS

CN Hexaneperoxoic acid, 2-ethyl-, 1,1-dimethylethyl ester (CA INDEX NAME)



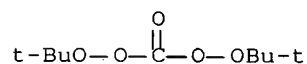
RN 3006-86-8 HCAPLUS

CN Peroxide, cyclohexylidenebis[(1,1-dimethylethyl) (9CI) (CA INDEX NAME)



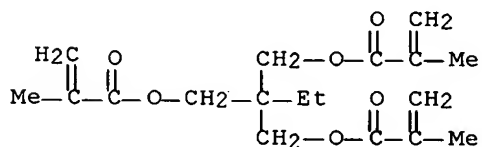
RN 3236-56-4 HCAPLUS

CN Carbonodiperoxoic acid, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



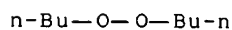
RN 3290-92-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-[2-ethyl-2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)



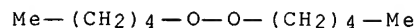
RN 3849-34-1 HCAPLUS

CN Peroxide, dibutyl (CA INDEX NAME)



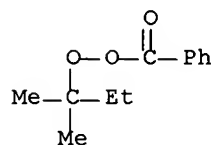
RN 3903-88-6 HCAPLUS

CN Peroxide, dipentyl (9CI) (CA INDEX NAME)



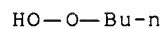
RN 4511-39-1 HCAPLUS

CN Benzenecarboperoxoic acid, 1,1-dimethylpropyl ester (9CI) (CA INDEX NAME)



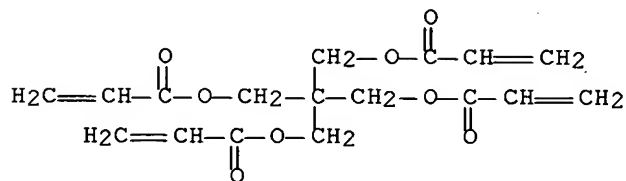
RN 4813-50-7 HCAPLUS

CN Hydroperoxide, butyl (9CI) (CA INDEX NAME)



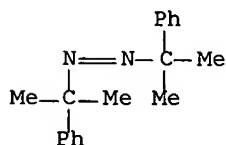
RN 4986-89-4 HCAPLUS

CN 2-Propenoic acid, 1,1'-[2,2-bis[[ (1-oxo-2-propen-1-yl)oxy]methyl]-1,3-propanediyl] ester (CA INDEX NAME)



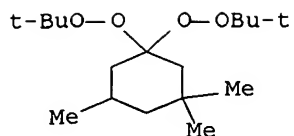
RN 5676-79-9 HCAPLUS

CN Diazene, bis(1-methyl-1-phenylethyl)- (9CI) (CA INDEX NAME)



RN 6731-36-8 HCAPLUS

CN Peroxide, (3,3,5-trimethylcyclohexylidene)bis[(1,1-dimethylethyl) (9CI) (CA INDEX NAME)



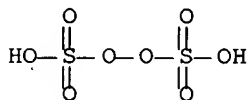
RN 7722-84-1 HCAPLUS

CN Hydrogen peroxide (H2O2) (9CI) (CA INDEX NAME)



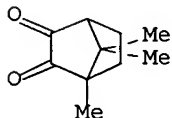
RN 7727-21-1 HCAPLUS

CN Peroxydisulfuric acid ([ (HO)S(O)2]2O2), dipotassium salt (9CI) (CA INDEX NAME)



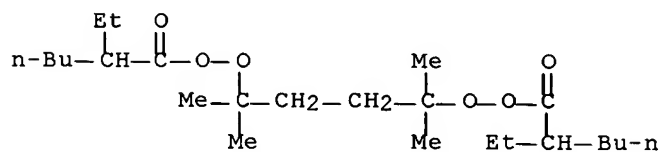
RN 10373-78-1 HCAPLUS

CN Bicyclo[2.2.1]heptane-2,3-dione, 1,7,7-trimethyl- (CA INDEX NAME)



RN 13052-09-0 HCAPLUS

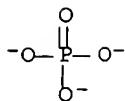
CN Hexaneperoxoic acid, 2-ethyl-, 1,1,4,4-tetramethyl-1,4-butanediyl ester (9CI) (CA INDEX NAME)



RN 14265-44-2 HCAPLUS

CN Phosphate (CA INDEX NAME)

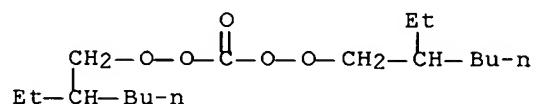




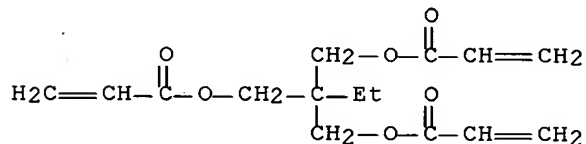
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RN 14798-03-9 HCAPLUS
CN Ammonium (CA INDEX NAME)
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 $\text{NH}_4^+$ 

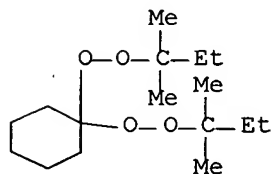
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RN      15618-65-2  HCAPLUS
CN      Carbonodiperoxoic acid, bis(2-ethylhexyl) ester (9CI)  (CA INDEX NAME)
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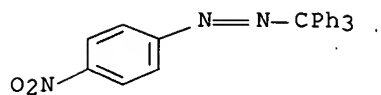
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RN      15625-89-5  HCAPLUS
CN      2-Propenoic acid, 1,1'-[2-ethyl-2-[[ (1-oxo-2-propen-1-yl) oxy]methyl]-1,3-
        propanediyl] ester (CA INDEX NAME)
```



RN	15667-10-4	HCAPLUS	
CN	Peroxide, cyclohexylidenebis[(1,1-dimethylpropyl) (9CI)	(CA INDEX NAME)	



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RN      16186-97-3   HCAPLUS
CN      Diazene, (4-nitrophenyl)(triphenylmethyl)- (9CI)   (CA INDEX NAME)
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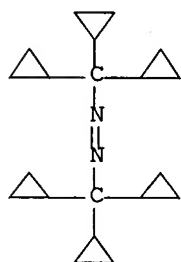
RN 16887-00-6 HCAPLUS  
CN Chloride (CA INDEX NAME)

Cl<sup>-</sup>

RN 17341-25-2 HCAPLUS  
CN Sodium, ion (Na<sup>+</sup>) (CA INDEX NAME)

Na<sup>+</sup>

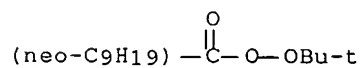
RN 17397-01-2 HCAPLUS  
CN Diazene, bis(tricyclopropylmethyl)- (9CI) (CA INDEX NAME)



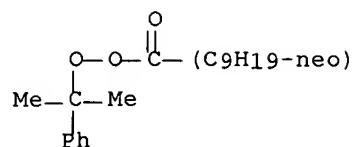
RN 24203-36-9 HCAPLUS  
CN Potassium, ion (K<sup>+</sup>) (CA INDEX NAME)

K<sup>+</sup>

RN 26748-41-4 HCAPLUS  
CN Neodecaneperoxoic acid, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

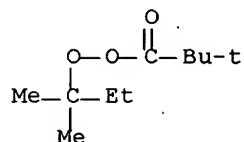


RN 26748-47-0 HCAPLUS  
CN Neodecaneperoxoic acid, 1-methyl-1-phenylethyl ester (9CI) (CA INDEX NAME)



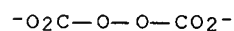
RN 29240-17-3 HCAPLUS

CN Propaneperoxoic acid, 2,2-dimethyl-, 1,1-dimethylpropyl ester (CA INDEX NAME)



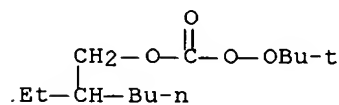
RN 34099-48-4 HCAPLUS

CN Peroxydicarbonate (CA INDEX NAME)



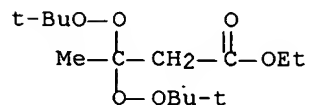
RN 34443-12-4 HCAPLUS

CN Carbonoperoxoic acid, OO-(1,1-dimethylethyl) O-(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



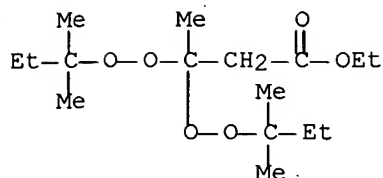
RN 55794-20-2 HCAPLUS

CN Butanoic acid, 3,3-bis[(1,1-dimethylethyl)dioxy]-, ethyl ester (9CI) (CA INDEX NAME)



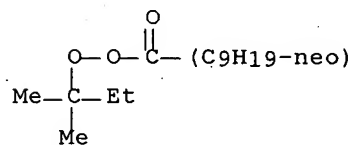
RN 67567-23-1 HCAPLUS

CN Butanoic acid, 3,3-bis[(1,1-dimethylpropyl)dioxy]-, ethyl ester (9CI) (CA INDEX NAME)



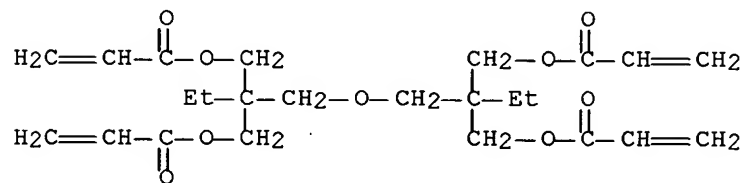
RN 68299-16-1 HCAPLUS

CN Neodecaneperoxoic acid, 1,1-dimethylpropyl ester (9CI) (CA INDEX NAME)



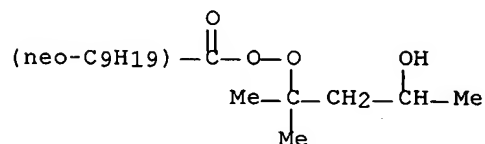
RN 94108-97-1 HCAPLUS

CN 2-Propenoic acid, 2-[[2,2-bis[[[(1-oxo-2-propenyl)oxy]methyl]butoxy]methyl]-2-ethyl-1,3-propanediyl ester (9CI) (CA INDEX NAME)



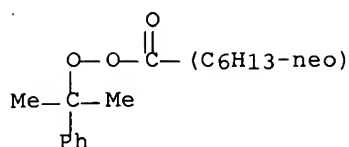
RN 95718-78-8 HCAPLUS

CN Neodecaneperoxoic acid, 3-hydroxy-1,1-dimethylbutyl ester (9CI) (CA INDEX NAME)



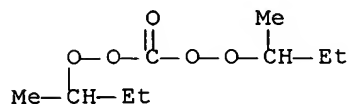
RN 130097-36-8 HCAPLUS

CN Neoheptaneperoxoic acid, 1-methyl-1-phenylethyl ester (9CI) (CA INDEX NAME)



RN 329897-06-5 HCAPLUS

CN Carbonodiperoxoic acid, bis(1-methylpropyl) ester (9CI) (CA INDEX NAME)



IT 9003-27-4

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(isobutylene rubber, graft polymerization of substrate surfaces for medical devices)

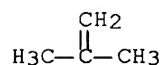
RN 9003-27-4 HCAPLUS

CN 1-Propene, 2-methyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 115-11-7

CMF C4 H8



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L38 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:938124 HCAPLUS Full-text

DOCUMENT NUMBER: 123:314875

TITLE: **Process** for the production of trioxane from formaldehyde

INVENTOR(S): Steele, Douglas W.; Jawaid, Mahmood N. A.; Allen, William Stewart; Thames, Norwood E., Jr.; Reck, Dwight A.

PATENT ASSIGNEE(S): Hoechst Celanese Corp., USA

SOURCE: PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9515960      A1      19950615      . WO 1994-US14008      19941206
W:  BR, CA, CN, JP, KR
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
US 5767294      A      19980616      US 1993-162689      19931206
EP 733050      A1      19960925      EP 1995-904247      19941206
EP 733050      B1      20021009
R:  DE, FR, GB
BR 9408251      A      19970527      BR 1994-8251      19941206
JP 09506105     T      19970617      JP 1994-516285      19941206
JP 3859701      B2      20061220      JP 1995-516285      19941206
PRIORITY APPLN. INFO.:      US 1993-162689      A 19931206
                                US 1993-18688      B2 19930217
                                WO 1994-US14008      W 19941206

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AB A **process** is described for the trimerization of aqueous formaldehyde solution to produce trioxane in a multistage in situ catalyst **reactor** -extractor column containing a cationic exchange **resin**. The **process** entails countercurrent flow of formaldehyde solution and solvent across **reactor** and extractor stages wherein trioxane, produced from formaldehyde at the **reactor** stages, is subsequently separated at the extractor stages utilizing a suitable solvent.

IT **54991-00-3**, Amberlyst XN 1010

RL: CAT (Catalyst use); USES (Uses)

(catalyst; **process** for production of trioxane from formaldehyde by multistage in-situ catalyst **reactor**-extractor column)

RN 54991-00-3 HCAPLUS

CN Amberlyst XN 1010 (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT **110-88-3P**, Trioxane, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)

(**process** for production of trioxane from formaldehyde by multistage in-situ catalyst **reactor**-extractor column)

RN 110-88-3 HCAPLUS

CN 1,3,5-Trioxane (CA INDEX NAME)



IT **50-00-0**, Formaldehyde, **reactions**

RL: RCT (Reactant); RACT (Reactant or reagent)

(**process** for production of trioxane from formaldehyde by multistage in-situ catalyst **reactor**-extractor column)

RN 50-00-0 HCAPLUS

CN Formaldehyde (CA INDEX NAME)



IT **75-09-2**, Methylene chloride, uses

**92-52-4**, Biphenyl, uses **95-47-6**, o-Xylene, uses

**95-50-1**, o-Dichlorobenzene **95-63-6**, 1,2,4-

Trimethylbenzene **98-82-8**, Cumene **98-86-2**,

Acetophenone, uses **100-41-4**, Ethylbenzene, uses **100-66-3**

, Anisole, uses **101-84-8**, Diphenyl ether **103-50-4**,

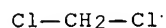
10/507,227

Benzyl ether 106-42-3, p-Xylene, uses 106-46-7,  
p-Dichlorobenzene 108-38-3, uses 108-88-3, Toluene,  
uses 108-90-7, Monochlorobenzene, uses 108-94-1,  
Cyclohexanone, uses 109-66-0, Pentane, uses 110-43-0,  
2-Heptanone 110-54-3, Hexane, uses 110-82-7,  
Cyclohexane, uses 119-61-9, Benzophenone, uses 119-64-2  
, Tetralin 142-82-5, Heptane, uses 142-96-1, Dibutyl  
ether 502-49-8, Cyclooctanone 544-01-4, Isopentyl  
ether 583-60-8, 2-Methyl cyclohexanone 827-52-1,  
Phenyl cyclohexane 1126-79-0, Butyl phenyl ether  
1191-17-9, 2,2-Dichloroethyl ether 19594-40-2, Isobutyl  
heptyl ketone 25551-13-7, Trimethylbenzene 25619-60-7,  
Tetramethylbenzene

RL: NUU (Other use, unclassified); USES (Uses)  
(solvent; **process** for production of trioxane from formaldehyde by  
multistage in-situ catalyst **reactor**-extractor column)

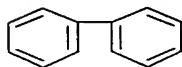
RN 75-09-2 HCAPLUS

CN Methane, dichloro- (CA INDEX NAME)



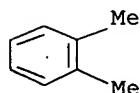
RN 92-52-4 HCAPLUS

CN 1,1'-Biphenyl (CA INDEX NAME)



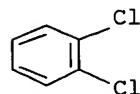
RN 95-47-6 HCAPLUS

CN Benzene, 1,2-dimethyl- (CA INDEX NAME)



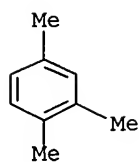
RN 95-50-1 HCAPLUS

CN Benzene, 1,2-dichloro- (CA INDEX NAME)

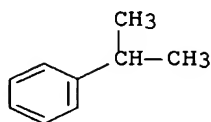


RN 95-63-6 HCAPLUS

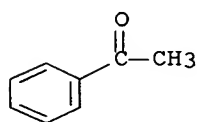
CN Benzene, 1,2,4-trimethyl- (CA INDEX NAME)



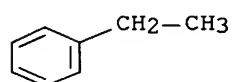
RN 98-82-8 HCAPLUS  
 CN Benzene, (1-methylethyl)- (CA INDEX NAME)



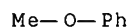
RN 98-86-2 HCAPLUS  
 CN Ethanone, 1-phenyl- (CA INDEX NAME)



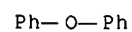
RN 100-41-4 HCAPLUS  
 CN Benzene, ethyl- (CA INDEX NAME)



RN 100-66-3 HCAPLUS  
 CN Benzene, methoxy- (CA INDEX NAME)

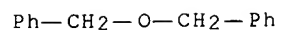


RN 101-84-8 HCAPLUS  
 CN Benzene, 1,1'-oxybis- (CA INDEX NAME)

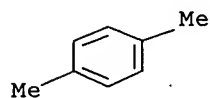


RN 103-50-4 HCAPLUS  
 CN Benzene, 1,1'-[oxybis(methylene)]bis- (9CI) (CA INDEX NAME)

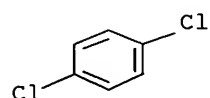




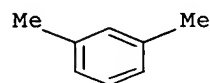
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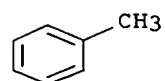
RN 106-46-7 HCAPLUS  
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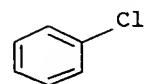
RN 108-38-3 HCAPLUS  
 CN Benzene, 1,3-dimethyl- (CA INDEX NAME)



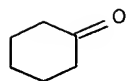
RN 108-88-3 HCAPLUS  
 CN Benzene, methyl- (CA INDEX NAME)



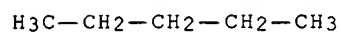
RN 108-90-7 HCAPLUS  
 CN Benzene, chloro- (CA INDEX NAME)



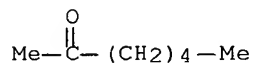
RN 108-94-1 HCAPLUS  
 CN Cyclohexanone (CA INDEX NAME)



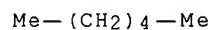
RN 109-66-0 HCAPLUS  
CN Pentane (CA INDEX NAME)



RN 110-43-0 HCAPLUS  
CN 2-Heptanone (CA INDEX NAME)



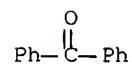
RN 110-54-3 HCAPLUS  
CN Hexane (CA INDEX NAME)



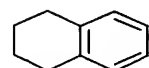
RN 110-82-7 HCAPLUS  
CN Cyclohexane (CA INDEX NAME)



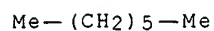
RN 119-61-9 HCAPLUS  
CN Methanone, diphenyl- (9CI) (CA INDEX NAME)



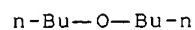
RN 119-64-2 HCAPLUS  
CN Naphthalene, 1,2,3,4-tetrahydro- (CA INDEX NAME)



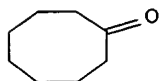
RN 142-82-5 HCAPLUS  
CN Heptane (CA INDEX NAME)



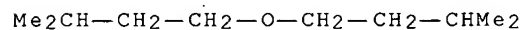
RN 142-96-1 HCAPLUS  
CN Butane, 1,1'-oxybis- (9CI) (CA INDEX NAME)



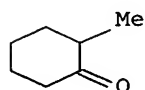
RN 502-49-8 HCAPLUS  
CN Cyclooctanone (CA INDEX NAME)



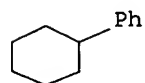
RN 544-01-4 HCAPLUS  
CN Butane, 1,1'-oxybis[3-methyl- (9CI) (CA INDEX NAME)



RN 583-60-8 HCAPLUS  
CN Cyclohexanone, 2-methyl- (CA INDEX NAME)



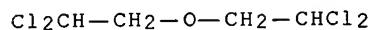
RN 827-52-1 HCAPLUS  
CN Benzene, cyclohexyl- (CA INDEX NAME)



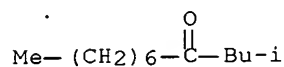
RN 1126-79-0 HCAPLUS  
CN Benzene, butoxy- (CA INDEX NAME)

n-Bu-O-Ph

RN 1191-17-9 HCAPLUS  
CN Ethane, 1,1'-oxybis[2,2-dichloro- (9CI) (CA INDEX NAME)



RN 19594-40-2 HCAPLUS  
CN 4-Undecanone, 2-methyl- (CA INDEX NAME)



RN 25551-13-7 HCAPLUS  
CN Benzene, trimethyl- (8CI, 9CI) (CA INDEX NAME)



3 ( D1-Me )

RN 25619-60-7 HCAPLUS  
CN Benzene, tetramethyl- (CA INDEX NAME)



4 ( D1-Me )

L38 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1993:604893 HCAPLUS Full-text  
DOCUMENT NUMBER: 119:204893  
TITLE: Preparation of poly(2,6-dimethyl-1,4-phenylene ether)  
(PPE)/epoxy laminate with functionalized PPE  
**resin**  
AUTHOR(S): Chao, Herbert S. I.; Whalen, Jana M.  
CORPORATE SOURCE: Gen. Electr. Corp. Res. and Dev. Cent., Schenectady,  
NY, 12301, USA  
SOURCE: Journal of Applied Polymer Science (1993), 49(9),

1537-46

CODEN: JAPNAB; ISSN: 0021-8995

DOCUMENT TYPE:

Journal

LANGUAGE:

English

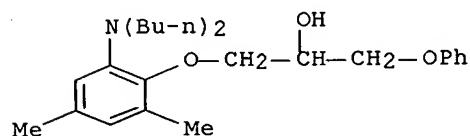
AB Thermal expansion property at 288° and CH<sub>2</sub>Cl<sub>2</sub> chloride resistance of poly(2,6-dimethyl-1,4-phenylene ether (I)/epoxy laminate were affected by the functionality on I **resin**. Nonlofting I/epoxy laminates were prepared with the I grafted with fumaric acid or the I having (di-n-butylamino)methyl substituent on the polymer backbone. Employing vacuum-vented I extrudate or phenol-redistributed I was also effective in improving the I/epoxy laminate properties. Attempts to preparing a real I/epoxy interpenetrating network as the matrix material for the laminate were also made by incorporating both I crosslinker and epoxy curing catalysts in the same formulation.

IT 150831-92-8

RL: RCT (Reactant); RACT (Reactant or reagent)  
(attempted **reaction** of; with Ph glycidyl ether, as model for **reaction** of functionalized polyoxyphenylene with epoxy **resin**)

RN 150831-92-8 HCAPLUS

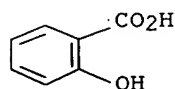
CN 2-Propanol, 1-[2-(dibutylamino)-4,6-dimethylphenoxy]-3-phenoxy- (9CI) (CA INDEX NAME)

IT 69-72-7, Salicylic acid, **reactions**

RL: RCT (Reactant); RACT (Reactant or reagent)  
(attempted **reaction** of, with polyoxyphenylene)

RN 69-72-7 HCAPLUS

CN Benzoic acid, 2-hydroxy- (CA INDEX NAME)



IT 78-63-7, 2,5-Dimethyl-2,5-di(tert-butylperoxy)hexane

80-15-9, Cumene hydroperoxide 118-75-2

, Chloranil, miscellaneous 614-45-9, tert-Butyl peroxybenzoate

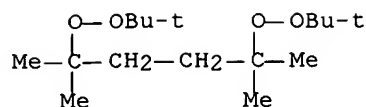
1338-23-4, Methyl ethyl ketone peroxide

RL: MOA (Modifier or additive use); USES (Uses)

(crosslinking agents, for preparation of functionalized polyoxyphenylene-epoxy **resin** laminates, properties in relation to)

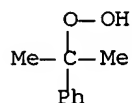
RN 78-63-7 HCAPLUS

CN Peroxide, (1,1,4,4-tetramethyl-1,4-butanediyl)bis[(1,1-dimethylethyl) (9CI) (CA INDEX NAME)



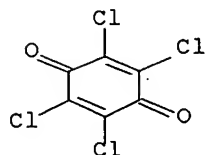
RN 80-15-9 HCAPLUS

CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)



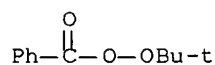
RN 118-75-2 HCAPLUS

CN 2,5-Cyclohexadiene-1,4-dione, 2,3,5,6-tetrachloro- (CA INDEX NAME)



RN 614-45-9 HCAPLUS

CN Benzenecarboperoxoic acid, 1,1-dimethylethyl ester (CA INDEX NAME)



RN 1338-23-4 HCAPLUS

CN 2-Butanone, peroxide (CA INDEX NAME)

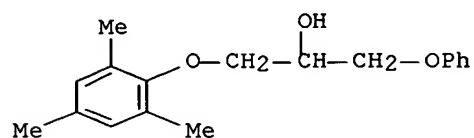
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IT 150831-91-7P

RL: FORM (Formation, nonpreparative); PREP (Preparation)  
 (formation of, model **reaction** of functionalized  
 polyoxyphenylene with epoxy **resin** in relation to)

RN 150831-91-7 HCAPLUS

CN 2-Propanol, 1-phenoxy-3-(2,4,6-trimethylphenoxy)- (9CI) (CA INDEX NAME)

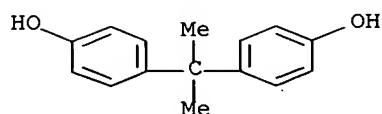


IT 80-05-7D, reaction products with functionalized polyoxyphenylene 4906-22-3D, 3,3',5,5'-Tetramethyldiphenquinone, reaction products with epoxy resins and functionalized polyoxyphenylene 9016-83-5D, Araldite HT 9490, reaction products with epoxy resins and functionalized polyoxyphenylene 24938-67-8D, Poly[oxy(2,6-dimethyl-1,4-phenylene)], functionalized, reaction products with epoxy resin 25068-38-6D, Epon 828, reaction products with functionalized polyoxyphenylene 25134-01-4D, functionalized, reaction products with epoxy resin

RL: USES (Uses)  
(laminates, fabrication and characterization of)

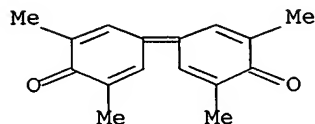
RN 80-05-7 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis- (9CI) (CA INDEX NAME)



RN 4906-22-3 HCAPLUS

CN 2,5-Cyclohexadien-1-one, 4-(3,5-dimethyl-4-oxo-2,5-cyclohexadien-1-ylidene)-2,6-dimethyl- (CA INDEX NAME)



RN 9016-83-5 HCAPLUS

CN Formaldehyde, polymer with methylphenol (CA INDEX NAME)

CM 1

CRN 1319-77-3

CMF C7 H8 O

CCI IDS

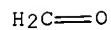


D1-OH

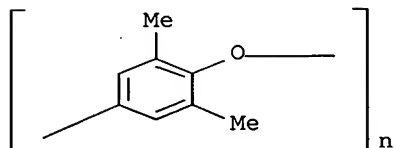
D1-Me

CM 2

CRN 50-00-0  
CMF C H2 O



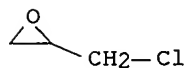
RN 24938-67-8 HCAPLUS  
CN Poly[oxy(2,6-dimethyl-1,4-phenylene)] (CA INDEX NAME)



RN 25068-38-6 HCAPLUS  
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane (CA INDEX NAME)

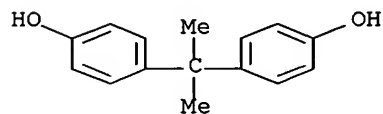
CM 1

CRN 106-89-8  
CMF C3 H5 Cl O



CM 2

CRN 80-05-7  
CMF C15 H16 O2

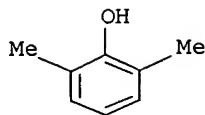


RN 25134-01-4 HCAPLUS  
CN Phenol, 2,6-dimethyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 576-26-1  
CMF C8 H10 O





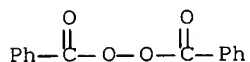
IT 94-36-0, Benzoyl peroxide, uses

RL: USES (Uses)

(polyoxyphenylene crosslinked with, for functionalization, for preparation of epoxy resin laminates)

RN 94-36-0 HCAPLUS

CN Peroxide, dibenzoyl (9CI) (CA INDEX NAME)



IT 110-17-8DP, Fumaric acid, reaction products with poly(dimethylphenylene ether) 111-92-2DP, Di-n-butylamine, reaction products with brominated polyoxyphenylene 128-08-5DP, reaction products with polyoxyphenylene and dibutylamine

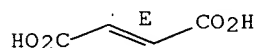
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with epoxy resin)

RN 110-17-8 HCAPLUS

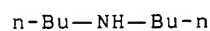
CN 2-Butenedioic acid (2E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



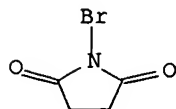
RN 111-92-2 HCAPLUS

CN 1-Butanamine, N-butyl- (CA INDEX NAME)



RN 128-08-5 HCAPLUS

CN 2,5-Pyrrolidinedione, 1-bromo- (CA INDEX NAME)

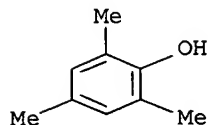


IT 527-60-6, Mesitol

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with Ph glycidyl ether, as model for  
 reaction of functionalized polyoxyphenylene with epoxy  
 resin)

RN 527-60-6 HCAPLUS

CN Phenol, 2,4,6-trimethyl- (CA INDEX NAME)

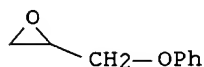


IT 122-60-1, Phenyl glycidyl ether

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with mesitol, as model for reaction  
 of functionalized polyoxyphenylene with epoxy resin)

RN 122-60-1 HCAPLUS

CN Oxirane, 2-(phenoxymethyl)- (CA INDEX NAME)



IT 75-09-2, Methylene chloride, properties

RL: PRP (Properties)  
 (resistance to, of functionalized polyoxyphenylene-epoxy resin  
 laminates, thermal expansion in relation to)

RN 75-09-2 HCAPLUS

CN Methane, dichloro- (CA INDEX NAME)



L38 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1986:70462 HCAPLUS Full-text

DOCUMENT NUMBER: 104:70462

TITLE: Attempt to use Melasil for production of wood-polymer  
 composites

AUTHOR(S): Lawniczak, Maciej; Kruczek, Jolanta

CORPORATE SOURCE: Akad. Roln., Poznan, 60-637, Pol.

SOURCE: Prace Komisji Technologii Drewna, Poznanskie  
 Towarzystwo Przyjaciol Nauk (1985), 11, 81-94  
 CODEN: PKTDAZ; ISSN: 0079-4724

DOCUMENT TYPE: Journal

LANGUAGE: Polish

AB Heating alderwood impregnated with Melasil K-1S [9003-08-1] (methylated  
 melamine-styrene mixture) containing Bz2O2 [94-36-0], cumene hydroperoxide  
 (I) [80-15-9], and menthapinane hydroperoxide II as polymerization catalysts,  
 KSB [100092-19-1] as crosslinking catalyst, and divinylbenzene (III) [1321-74-0]  
 as crosslinking agent gave reinforced wood exhibiting high

10/507,227

dimensional stability, static bending strength, and hardness. The optimum **reaction** conditions were: Bz2O2, I, and II concentration 0.75 (each), KSB 5.0, and III 1.0 part (based on the reinforcing **resin** ), heating time 6 h, and heating mode 2 h at 85-95°, 2 h at 95-110°, 2 h at 110°.

IT 9003-53-6

RL: USES (Uses)

(alderwood reinforced with crosslinked formaldehyde-melamine copolymers and, physicomach. properties of)

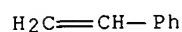
RN 9003-53-6 HCAPLUS

CN Benzene, ethenyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 100-42-5

CMF C8 H8



IT 9003-08-1

RL: USES (Uses)

(alderwood reinforced with polystyrene and crosslinked, physicomach. properties of)

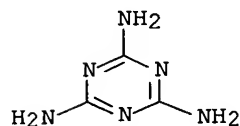
RN 9003-08-1 HCAPLUS

CN 1,3,5-Triazine-2,4,6-triamine, polymer with formaldehyde (CA INDEX NAME)

CM 1

CRN 108-78-1

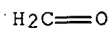
CMF C3 H6 N6



CM 2

CRN 50-00-0

CMF C H2 O



RL: USES (Uses)

(alderwood reinforced with, physicomach. properties of

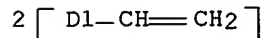
IT 1321-74-0, uses and miscellaneous

RL: MOA (Modifier or additive use); USES (Uses)

(crosslinking agents, methylated melamine-styrene mixture containing, alderwood reinforcement with)

RN 1321-74-0 HCAPLUS

CN Benzene, diethenyl- (9CI) (CA INDEX NAME)



IT 100092-19-1

RL: CAT (Catalyst use); USES (Uses)

(crosslinking catalysts, methylated melamine-styrene mixture containing, alderwood reinforcement with)

RN 100092-19-1 HCAPLUS

CN KSB (catalyst) (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

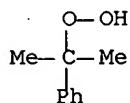
IT 80-15-9 94-36-0, uses and miscellaneous

RL: CAT (Catalyst use); USES (Uses)

(polymerization catalysts, methylated melamine-styrene mixture containing, alderwood reinforcement with)

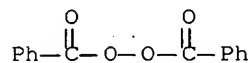
RN 80-15-9 HCAPLUS

CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)



RN 94-36-0 HCAPLUS

CN Peroxide, dibenzoyl (9CI) (CA INDEX NAME)



L38 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1966:507804 HCAPLUS Full-text

DOCUMENT NUMBER: 65:107804

ORIGINAL REFERENCE NO.: 65:20053f-g

TITLE: Alkylation of benzene catalyzed by sulfonated resins

PATENT ASSIGNEE(S): Mobil Oil Corp.

SOURCE: 3 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

10/507,227

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 1023426		19660323	GB 1962-36544	19620926
PRIORITY APPLN. INFO.:			US	19611009

AB A vinyl aromatic polymer cross-linked with divinylbenzene (I) and sulfonated, having <4% cross-linking and particle size <500  $\mu$  is used as catalyst. Thus, a mixture of 78 g. C<sub>6</sub>H<sub>6</sub>, 8.6 g. propylene, and 2 g. catalyst was heated to 130° in an autoclave to give **cumene**. The rate of alkylation was measured as millimoles **cumene** produced per g. of catalyst/hr. The initial pressure (140 psi.) was decreased to 80 psi. as the **reaction** proceeded. The catalysts used were the acid form of sulfonated styrene-divinylbenzene ion-exchange **resins**. With 8% I in the polymer, the yield of **cumene** was 7.1 millimoles/g. of catalyst/hr. With 4, 2, 1, and 0.5% I, the yields were 8.9, 29, 61, and 60 millimoles/g./hr., resp. The catalyst particle size in these expts. was 150  $\mu$ .

IT 71-43-2, Benzene  
(alkylation of, with propene, ion-exchanging substances from divinylbenzene-cross-linked sulfonated styrene polymer catalysts in)

RN 71-43-2 HCAPLUS

CN Benzene (CA INDEX NAME)



IT 9003-53-6, Styrene polymers  
(ion-exchanging substances from divinylbenzene-cross-linked sulfonated, catalysts, in benzene **reaction** with propene)

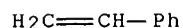
RN 9003-53-6 HCAPLUS

CN Benzene, ethenyl-, homopolymer (CA INDEX NAME)

CM 1

CRN 100-42-5

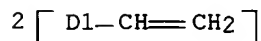
CMF C8 H8



IT 1321-74-0, Benzene, divinyl-  
(ion-exchanging substances from sulfonated styrene polymers cross-linked by, catalysts, in benzene **reaction** with propene)

RN 1321-74-0 HCAPLUS

CN Benzene, diethenyl- (9CI) (CA INDEX NAME)



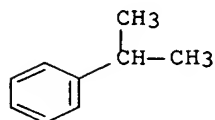
IT 98-82-8P, Cumene

RL: PREP (Preparation)

(manufacture of, by benzene alkylation with propene, ion-exchanging substances from divinylbenzene-cross-linked sulfonated styrene polymer catalysts in)

RN 98-82-8 HCAPLUS

CN Benzene, (1-methylethyl)- (CA INDEX NAME)

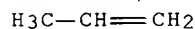


IT 115-07-1, Propene

(reactions of, with benzene, ion-exchanging substances from divinylbenzene-cross-linked sulfonated styrene polymer catalysts in)

RN 115-07-1 HCAPLUS

CN 1-Propene (CA INDEX NAME)



L38 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1966:85595 HCAPLUS Full-text

DOCUMENT NUMBER: 64:85595

ORIGINAL REFERENCE NO.: 64:16142e-g

TITLE: Coating compositions comprising carboxyl interpolymers and epoxidized fatty acid esters

INVENTOR(S): Graver, Richard.B.

PATENT ASSIGNEE(S): Archer-Daniels-Midland Co.

SOURCE: 4 pp.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

FAMILY ACC. NUM. COUNT: 1

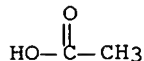
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3236795		19660222	US 1961-92744	19610302

AB Thermosetting film-forming **resins** are prepared from non drying, epoxidized, long-chain fatty acid material made from copolymers of styrene or vinyltoluene with an acrylic acid, and alkyl acrylates cross-linked with epoxidized long-chain fatty esters. For example, a mixture of 65 parts xylene and 16 parts BuOH was heated to 240°F. and treated dropwise during 3 hrs. with a mixture of vinyltoluene 50, Me methacrylate 10.2, 2-ethylhexyl acrylate 6, methacrylic acid 12.9, and **cumene hydroperoxide** 2.4 parts. The **reaction** mixture was maintained at 240°F. owing the addition and for 3 hrs. thereafter; the nonvolatile content of the mixture was 50%, which indicated that the copolymerization **reaction** was complete. This copolymer (100 parts) and 15 parts epoxidized soybean oil containing 6.3 weight % internal epoxy O were mixed with 12 parts xylene and 3 parts BuOH. Films of this blend cast on glass and baked 30 min. at 300-50°F. were tough, hard, flexible, and had

excellent soap, alkali, water, and solvent resistance. The copolymer (100 parts) was blended with 10 parts epoxidized linseed oil having an epoxy O content of 8.5%, 8 parts xylene, and 2 parts BuOH. Films of this blend were prepared and baked 30 min. at 300-50°F. These films were hard and flexible and had excellent soap, alkali, water, and solvent resistance.

IT 127-09-3, Sodium acetate 1310-58-3, Potassium hydroxide  
14800-24-9, Ammonium, benzyltrimethyl  
(catalysts, in curing of coatings from epoxidized oils and styrene polymers with unsatd. acids and esters)  
RN 127-09-3 HCAPLUS  
CN Acetic acid, sodium salt (7CI, 8CI, 9CI) (CA INDEX NAME)

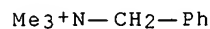


● Na

RN 1310-58-3 HCAPLUS  
CN Potassium hydroxide (K(OH)) (9CI) (CA INDEX NAME)

K-OH

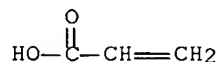
RN 14800-24-9 HCAPLUS  
CN Benzenemethanaminium, N,N,N-trimethyl- (CA INDEX NAME)



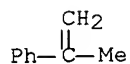
IT 14798-03-9, Ammonium  
(compds., substituted, catalysts, in curing of coatings from epoxidized oils and styrene polymers with unsatd. acids and esters)  
RN 14798-03-9 HCAPLUS  
CN Ammonium (CA INDEX NAME)

$\text{NH}_4^+$

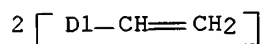
IT 79-10-7, Acrylic acid  
(ester polymers, with styrene or styrene derivs. and unsatd. acids, coatings containing)  
RN 79-10-7 HCAPLUS  
CN 2-Propenoic acid (CA INDEX NAME)



IT 98-83-9, Styrene,  $\alpha$ -methyl- 1321-74-0, Benzene,  
divinyl-  
(polymers with acrylic, crotonic or methacrylic acid and acrylic acid  
esters or methacrylic acid esters, for coatings)  
RN 98-83-9 HCAPLUS  
CN Benzene, (1-methylethenyl)- (CA INDEX NAME)



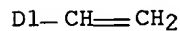
RN 1321-74-0 HCAPLUS  
CN Benzene, diethenyl- (9CI) (CA INDEX NAME)



IT 25013-15-4, Styrene, ar-methyl- 28106-30-1, Styrene,  
ar-ethyl-  
(polymers, with acrylic, crotonic or methacrylic acid and acrylic acid  
esters or methacrylic acid esters, for coatings)  
RN 25013-15-4 HCAPLUS  
CN Benzene, ethenylmethyl- (9CI) (CA INDEX NAME)



D1-Me



RN 28106-30-1 HCAPLUS  
CN Benzene, ethenylethyl- (9CI) (CA INDEX NAME)



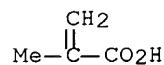
D1- CH=CH<sub>2</sub>

D1- Et

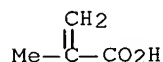
IT 25087-26-7, Methacrylic acid, homopolymer  
 (with esters and styrene or styrene derivs.)  
 RN 25087-26-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-41-4  
 CMF C4 H6 O2



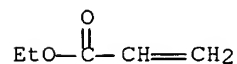
IT 79-41-4, Methacrylic acid  
 (with styrene or styrene derivs. and unsatd. acids, coatings containing)  
 RN 79-41-4 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl- (CA INDEX NAME)



IT 9003-32-1, Acrylic acid, ethyl ester polymers 9003-77-4,  
 Acrylic acid, 2-ethylhexyl ester polymers  
 (with styrene or styrene derivs. and unsatd. acids, for coatings)  
 RN 9003-32-1 HCAPLUS  
 CN 2-Propenoic acid, ethyl ester, homopolymer (CA INDEX NAME)

CM 1

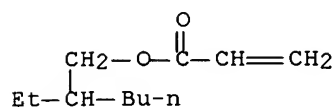
CRN 140-88-5  
 CMF C5 H8 O2



RN 9003-77-4 HCAPLUS  
 CN 2-Propenoic acid, 2-ethylhexyl ester, homopolymer (CA INDEX NAME)

CM 1

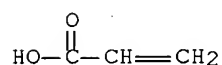
CRN 103-11-7  
CMF C11 H20 O2



IT 9003-01-4, Acrylic acid, homopolymer 26007-90-9,  
Crotonic acid, homopolymer  
(with styrene or styrene derivs. and unsatd. esters)  
RN 9003-01-4 HCAPLUS  
CN 2-Propenoic acid, homopolymer (CA INDEX NAME)

CM 1

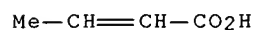
CRN 79-10-7  
CMF C3 H4 O2



RN 26007-90-9 HCAPLUS  
CN 2-Butenoic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 3724-65-0  
CMF C4 H6 O2



L38 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1957:34982 HCAPLUS

DOCUMENT NUMBER: 51:34982

ORIGINAL REFERENCE NO.: 51:6689b-d

TITLE: Separation of  $\alpha$ -methylstyrenes from  
isopropylbenzenes

INVENTOR(S): Schmidle, Claude J.

PATENT ASSIGNEE(S): Rohm & Haas Co.

DOCUMENT TYPE: Patent

LANGUAGE: Unavailable

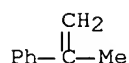
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2775630		19561225	US 1953-336452	19530211

AB p-MeC<sub>6</sub>H<sub>4</sub>CMe:CH<sub>2</sub> (I), MeNH<sub>2</sub>.HCl, and 37% CH<sub>2</sub>O form the H<sub>2</sub>O-soluble salt of a mixture (II) of bases. Any p-MeC<sub>6</sub>H<sub>4</sub>CHMe<sub>2</sub> (III) present in the I can be extracted and removed, or the **reaction** can be used to remove contaminating I from III. From II were obtained 2 substances, b10 130-40° and b10 150-60°, probably p-MeC<sub>6</sub>H<sub>4</sub>CMe:CHCH<sub>2</sub>NHMe and 3,6-dimethyl-6-p-methylphenyltetrahydro-1,3-oxazine, resp. Other primary and secondary amines can be used. Phenyl(diethylamino)butene, n<sub>20</sub> 1.5130, b<sub>25</sub> 140-6°, was prepared as above. From I, NH<sub>4</sub>Cl, and aqueous CH<sub>2</sub>O a basic compound, b<sub>5</sub> 143-55°, was obtained. The **reaction** can also be carried out in HOAc with paraform and H<sub>3</sub>PO<sub>4</sub>. II can be used in the manufacture of insecticides, flotation agents, **resins**, and corrosion inhibitors.

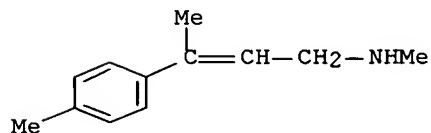
IT **98-83-9P**, Styrene, α-methyl-  
 RL: PREP (Preparation)  
 (and derivs., separation of)  
 RN 98-83-9 HCAPLUS  
 CN Benzene, (1-methylethenyl)- (CA INDEX NAME)



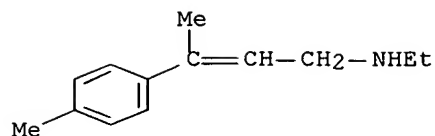
IT **71-43-2P**, Benzene  
 RL: PREP (Preparation)  
 (manufacture of)  
 RN 71-43-2 HCAPLUS  
 CN Benzene (CA INDEX NAME)



IT **100368-49-8P**, Cinnamylamine, N,p,β-trimethyl-  
**100617-10-5P**, Cinnamylamine, N-ethyl-p,β-dimethyl-  
**100617-72-9P**, 2H-1,3-Oxazine, tetrahydro-3,6-dimethyl-6-p-tolyl-  
**101775-12-6P**, Cinnamylamine, N,N-diethyl-β-methyl-  
**101775-62-6P**, 2H-1,3-Oxazine, 3-ethyltetrahydro-6-methyl-6-p-tolyl-  
 RL: PREP (Preparation)  
 (preparation of)  
 RN 100368-49-8 HCAPLUS  
 CN Cinnamylamine, N,p,β-trimethyl- (6CI) (CA INDEX NAME)

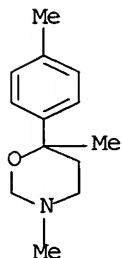


RN 100617-10-5 HCAPLUS  
 CN Cinnamylamine, N-ethyl-p,β-dimethyl- (6CI) (CA INDEX NAME)



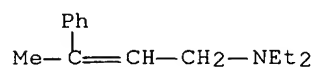
RN 100617-72-9 HCAPLUS

CN 2H-1,3-Oxazine, tetrahydro-3,6-dimethyl-6-p-tolyl- (6CI) (CA INDEX NAME)



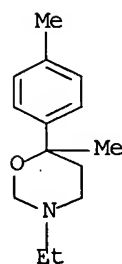
RN 101775-12-6 HCAPLUS

CN Cinnamylamine, N,N-diethyl-beta-methyl- (6CI) (CA INDEX NAME)



RN 101775-62-6 HCAPLUS

CN 2H-1,3-Oxazine, 3-ethyltetrahydro-6-methyl-6-p-tolyl- (6CI) (CA INDEX NAME)

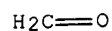


IT 50-00-0, Formaldehyde

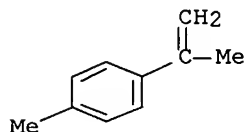
(reaction products of, with amines and styrene derivs.)

RN 50-00-0 HCAPLUS

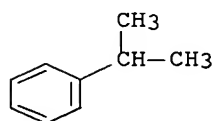
CN Formaldehyde (CA INDEX NAME)



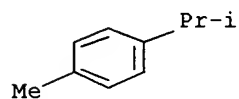
IT 1195-32-0, Styrene, p, $\alpha$ -dimethyl-  
 (reaction products with amines and aldehydes)  
 RN 1195-32-0 HCAPLUS  
 CN Benzene, 1-methyl-4-(1-methylethenyl)- (CA INDEX NAME)



IT 98-82-8P, Cumene  
 RL: PREP (Preparation)  
 (separation from  $\alpha$ -methylstyrene)  
 RN 98-82-8 HCAPLUS  
 CN Benzene, (1-methylethyl)- (CA INDEX NAME)



IT 99-87-6P, p-Cymene  
 RL: PREP (Preparation)  
 (separation of)  
 RN 99-87-6 HCAPLUS  
 CN Benzene, 1-methyl-4-(1-methylethyl)- (CA INDEX NAME)



L38 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1952:56011 HCAPLUS  
 DOCUMENT NUMBER: 46:56011  
 ORIGINAL REFERENCE NO.: 46:9324b-f  
 TITLE: Copolymers of cyclopentadiene  
 INVENTOR(S): Gerhart, Howard L.  
 PATENT ASSIGNEE(S): Pittsburgh Plate Glass Co.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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 US 2601273                      19520624      US 1950-166983                      19500608

AB Cyclopentadiene (I) and its lower homopolymers (dimers to tetramers) which crack to I under **reaction** conditions may be thermally copolymerized with a wide variety of vinyl monomers and unsatd. oils to give products of use as drying oils, coating compns., and film formers. In general a mixture of an unsatd. glyceride or other drying oil (II) 20-95, I 5-80, and a vinyl monomer (III) 1-50% is heated to 300-600°F. (optimum 450-550°F.) to cause copolymerization. III increases the **reaction** rate over that for I + II alone, and **reaction** is initiated at a temperature higher than maintenance temperature. Sometimes a radical catalyst (IV) is used. The products may be liquids or solids, are soluble in petroleum and vegetable oils, and may be conditioned for use by the addition of dryers or pigments. As II is used, singly or in mixture, linseed oil (V), tung oil, soybean oil, tung oil, or castor oil. As III is used, singly or in mixture, divinylbenzene (VI), styrenes (including p-Me-, p,α-di-Me-, α-Me-), various diallyl ethers and esters, vinyl acetate, indene, acrylonitrile, and diamylene. Dicyclopentadiene (VII) is most often used. As IV is used Bz2O2 and **cumene hydroperoxide**, usually to bring about a preliminary **reaction** which is completed thermally. In a typical experiment, V 492, VI 40, and VII 268 parts were heated to 530°F. for 2.25 hrs. Thinning the product with mineral spirits gave a good varnish. In another type of procedure, V 50, styrene 85, and VII 15 parts were heated to 80°C. with stirring and refluxing. Bz2O2 (1 part) was added, and the whole was heated to 160°C. over a period of 1 hr. and held for 2 hrs. Then the temperature was gradually raised to 200°C. over 3.5 hrs. and held for 60 hrs. The product increased in body, was a **resin** of light-yellow color, and had an iodine number of 107. I and II may also be initially combined thermally, and III added, with or without IV, to finish the product, or the order I and III, then II may be used.

IT **25568-84-7P**, Cyclopentadiene, homopolymer

RL: PREP (Preparation)

(for use as coatings and drying oils)

RN 25568-84-7 HCAPLUS

CN 1,3-Cyclopentadiene, homopolymer (CA INDEX NAME)

CM 1

CRN 542-92-7

CMF C5 H6



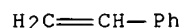
IT **100-42-5P**, Styrene

RL: PREP (Preparation)

(polymers of styrene derivs. and, with cyclopentadiene or its polymers and unsatd. oils for use as coatings and drying oils)

RN 100-42-5 HCAPLUS

CN Benzene, ethenyl- (CA INDEX NAME)



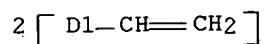
IT **1321-74-0P**, Benzene, divinyl-

RL: PREP (Preparation)

(polymers of, with cyclopentadiene homopolymers and unsatd. oils, for use as coatings and drying oils)

RN 1321-74-0 HCAPLUS

CN Benzene, diethenyl- (9CI) (CA INDEX NAME)



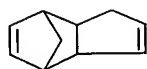
IT 77-73-6P, 4,7-Methanoindene, 3a,4,7,7a-tetrahydro-  
542-92-7P, Cyclopentadiene

RL: PREP (Preparation)

(polymers of, with unsatd. oils and vinyl compds., for use as coatings and drying oils)

RN 77-73-6 HCAPLUS

CN 4,7-Methano-1H-indene, 3a,4,7,7a-tetrahydro- (CA INDEX NAME)



RN 542-92-7 HCAPLUS

CN 1,3-Cyclopentadiene (CA INDEX NAME)



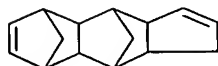
IT 7158-25-0P, Tricyclopentadiene

RL: PREP (Preparation)

(polymers with unsatd. oils and vinyl compds., for use as coatings and drying oils)

RN 7158-25-0 HCAPLUS

CN 4,9:5,8-Dimethano-1H-benz[f]indene, 3a,4,4a,5,8,8a,9,9a-octahydro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



## SEARCH IN USPATFULL

=&gt; d que stat 144

L7 1 SEA FILE=REGISTRY ABB=ON "CUMENE HYDROPEROXIDE"/CN  
 L8 1 SEA FILE=REGISTRY ABB=ON CUMENE/CN  
 L9 1 SEA FILE=REGISTRY ABB=ON 4-ETHENYLPIRIDINE/CN  
 L10 1 SEA FILE=REGISTRY ABB=ON DIETHENYLBENZENE/CN  
 L11 1 SEA FILE=REGISTRY ABB=ON METHYL CHLORIDE/CN  
 L29 14194 SEA FILE=HCAPLUS ABB=ON (L7 OR ?CUMENE?) AND (L8 OR ?CUMENE? (W  
 ) ?HYDROPEROXIDE?)  
 L30 8387 SEA FILE=HCAPLUS ABB=ON L29 AND (?REACT? OR ?PROCESS?)  
 L39 8698 SEA FILE=USPATFULL ABB=ON L30 AND (?OXID?(W)?AGENT? OR  
 ?RESIN? OR (?ORGANIC? OR ?INORGANIC?) (W)?CATION?)  
 L40 1554 SEA FILE=USPATFULL ABB=ON L39 AND (L9 OR 4(W)?ETHENYLPIRIDINE?  
 OR L10 OR ?DIETHENYLBENZENE? OR ?ETHYNYLETHYLBENZENE? OR L11  
 OR METHYL?(W)?CHLORIDE?)  
 L41 1540 SEA FILE=USPATFULL ABB=ON L40 AND ?REACT?  
 L42 178 SEA FILE=USPATFULL ABB=ON L41 AND ?LIQUID?(W)?PHASE?  
 L43 137 SEA FILE=USPATFULL ABB=ON L42 AND ?SYNTH?  
 L44 7 SEA FILE=USPATFULL ABB=ON L43 AND ?RELEAS?(4A)?INORG?

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L44 ANSWER 1 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2006:16596 USPATFULL Full-text
 TITLE: **Process for the synthesis of  
cumene hydroperoxide**

INVENTOR(S): Codignola, Franco, Milano, ITALY

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006014985	A1	20060119
APPLICATION INFO.:	US 2003-507227	A1	20020314 (10)
	WO 2002-IT157		20020314
			20050511 PCT 371 date

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: OHLANDT, GREELEY, RUGGIERO & PERLE, LLP, ONE LANDMARK  
SQUARE, 10TH FLOOR, STAMFORD, CT, 06901, US

NUMBER OF CLAIMS: 20

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 2 Drawing Page(s)

LINE COUNT: 448

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention refers to a **process** for the **synthesis** of **cumene hydroperoxide**  
 and to the product thus obtained. More in particular, this invention refers  
 to a **process** for the production of **cumene hydroperoxide** by oxidating **cumene**  
 with oxygen, where this **process** is run in the presence of a basic medium  
 insoluble in the **reaction** environment, and such as not to **release inorganic**  
**cations** to the **reaction** environment. Such a basic medium is preferably a  
 pyridinic **resin**. The **cumene hydroperoxide** thus obtained, characterized by  
 the fact of being free of **inorganic cations**, is a further object of the  
 invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

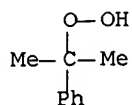
IT 80-15-9P, Cumene hydroperoxide

(production of cumene hydroperoxide from cumene in presence of  
 vinylpyridine resin catalyst)



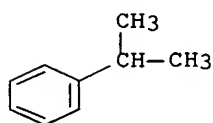
10/507,227

RN 80-15-9 USPATFULL  
CN Hydroperoxide, 1-methyl-1-phenylethyl (9CI) (CA INDEX NAME)



IT 98-82-8, Cumene  
(production of cumene hydroperoxide from cumene in presence of vinylpyridine resin catalyst)

RN 98-82-8 USPATFULL  
CN Benzene, (1-methylethyl)- (CA INDEX NAME)



L44 ANSWER 2 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2003:190751 USPATFULL Full-text  
TITLE: Alkylbenzenesulfonate surfactants  
INVENTOR(S): Scheibel, Jeffrey John, Loveland, OH, United States  
Cripe, Thomas Anthony, Loveland, OH, United States  
Kott, Kevin Lee, Loveland, OH, United States  
Connor, Daniel Stedman, Cincinnati, OH, United States  
Vinson, Phillip Kyle, Fairfield, OH, United States  
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6593285	B1	20030715
APPLICATION INFO.:	US 2000-478908		20000107 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. WO 1998-IB1101, filed on 20 Jul 1998		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-53318P	19970721 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Ogden, Necholus	
LEGAL REPRESENTATIVE:	Robinson, Ian S., Zerby, Kim W., Miller, Steven W.	
NUMBER OF CLAIMS:	20	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)	
LINE COUNT:	2521	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		
AB	A surfactant composition comprising:	

alkylarylsulfonate surfactant system comprising at least two isomers of the alkylarylsulfonate surfactant of the formula: ##STR1##

wherein:

L is an acyclic aliphatic hydrocarbyl of from 6 to 18 carbon atoms in total;

M is a cation or cation mixture and q is the valence thereof;

a and b are numbers selected such that said alkylarylsulfonate surfactant is electroneutral;

R', R" and R'" are independently selected from H and C.sub.1 to C.sub.3 alkyl;

both of R' and R" are nonterminally attached to L and at least one of R' and R" is C.sub.1 to C.sub.3 alkyl; and

A is aryl;

wherein:

said alkylarylsulfonate surfactant system comprises two or more isomers with respect to positions of attachment of R', R" and A to L;

in at least about 40% of said composition, A is attached to L in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms of L; and

wherein further said alkylarylsulfonate surfactant system has at least one of the following properties:

said alkylarylsulfonate surfactant system has a ratio of nonquaternary to quaternary carbon atoms in L of at least about 5:1 by weight, when said quaternary carbon atoms are present; or

percentage biodegradation, as measured by the modified SCAS test, that exceeds tetrapropylene benzene sulfonate.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L44 ANSWER 3 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2003:169010 USPATFULL Full-text

TITLE: Laundry detergents comprising modified alkylbenzene sulfonates

INVENTOR(S): Kott, Kevin Lee, Cincinnati, OH, United States

10/507,227

Scheibel, Jeffrey John, Loveland, OH, United States  
 Severson, Roland George, Cincinnati, OH, United States  
 Cripe, Thomas Anthony, Loveland, OH, United States  
 Burckett-St. Laurent, James Charles Theophile Roger,  
 Cincinnati, OH, United States  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United  
 States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6583096	B1	20030624
	WO 2000023548		20000427
APPLICATION INFO.:	US 2001-807364		20010412 (9)
	WO 1999-US24031		19991013

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-104962P	19981020 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Ogden, Necholus	
LEGAL REPRESENTATIVE:	Cook, C. Brant, Taffy, Frank, Zerby, Kim W.	
NUMBER OF CLAIMS:	20	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)	
LINE COUNT:	3896	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Modified alkylbenzene sulfonate mixtures comprise a mixture of specific branched and non-branched alkylbenzene sulfonate compounds, and are further characterised by a 2/3-phenyl index of 160-275. Detergent and cleaning products containing these mixtures are also claimed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L44 ANSWER 4 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2003:33446 USPATFULL Full-text  
 TITLE: Laundry detergents comprising modified alkylbenzene sulfonates  
 INVENTOR(S): Kott, Kevin Lee, Cincinnati, OH, United States  
 Scheibel, Jeffrey John, Loveland, OH, United States  
 Severson, Roland George, Cincinnati, OH, United States  
 Cripe, Thomas Anthony, Loveland, OH, United States  
 Burckett-St. Laurent, James Charles Theophile Roger, Cincinnati, OH, United States  
 PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6514926	B1	20030204
	WO 2000023549		20000427
APPLICATION INFO.:	US 2001-807363		20010412 (9)
	WO 1999-US24032		19991013

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-60105017	19981020
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	

10/507,227

PRIMARY EXAMINER: Ogden, Necholus  
LEGAL REPRESENTATIVE: Taffy, Frank, Cook, C. Brant, Zerby, Kim W.  
NUMBER OF CLAIMS: 20  
EXEMPLARY CLAIM: 1  
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)  
LINE COUNT: 4559

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Modified alkylbenzene sulfonate surfactant mixtures comprise a mixture of specific branched and non-branched alkylbenzene sulfonate compounds, and are further characterised by 2/3-phenyl index of 257-10000. Detergent and cleaning products containing these mixtures are also claimed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L44 ANSWER 5 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2002:192026 USPATFULL Full-text

TITLE: Alkylaryls

INVENTOR(S): Kott, Kevin Lee, Loveland, OH, UNITED STATES  
Scheibel, Jeffrey John, Loveland, OH, UNITED STATES  
Cripe, Thomas Anthony, Loveland, OH, UNITED STATES  
Connor, Daniel Stedman, Cincinnati, OH, UNITED STATES  
Vinson, Phillip Kyle, Fairfield, OH, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002103096	A1	20020801
	US 6908894	B2	20050621
APPLICATION INFO.:	US 2001-38170	A1	20011022 (10)
RELATED APPLN. INFO.:	Division of Ser. No. US 2000-479365, filed on 7 Jan 2000, PATENTED Continuation of Ser. No. WO 1998-IB1103, filed on 20 Jul 1998, UNKNOWN		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-53321P	19970721 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	THE PROCTER & GAMBLE COMPANY, PATENT DIVISION, IVORYDALE TECHNICAL CENTER - BOX 474, 5299 SPRING GROVE AVENUE, CINCINNATI, OH, 45217	
NUMBER OF CLAIMS:	9	
EXEMPLARY CLAIM:	1	
LINE COUNT:	2829	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A surfactant composition comprising: alkylarylsulfonate surfactant system comprising at least two isomers of the alkylarylsulfonate surfactant of the formula: ##STR1##

wherein:

L is an acyclic aliphatic hydrocarbyl of from 6 to 18 carbon atoms in total;

M is a cation or cation mixture and q is the valence thereof;

a and b are numbers selected such that said composition is electroneutral;

R' is selected from H and C.sub.1 to C.sub.3 alkyl;

R" is selected from H and C.sub.1 to C.sub.3 alkyl;

R'" is selected from H and C.sub.1 to C.sub.3 alkyl;

any of R' and R" is nonterminally attached to L and at least one of R' and R" is C.sub.1 to C.sub.3 alkyl; and

A is aryl; and

wherein:

said alkylarylsulfonate surfactant system comprises two or more isomers with respect to positions of attachment of R', R" and A to L;

in at least about 60% of said composition, A is attached to L in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof; and

wherein further said alkylarylsulfonate surfactant system has at least one (preferably both) of the following properties:

said alkylarylsulfonate surfactant system has a ratio of nonquaternary to quaternary carbon atoms in L of at least about 10:1 by weight, when said quaternary carbon atoms are present; and

there is no more than 40% by weight loss as measured by Hardness Tolerance Test.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L44 ANSWER 6 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2001:185252 USPATFULL Full-text

TITLE: Alkylbenzenesulfonate surfactants

INVENTOR(S): Kott, Kevin Lee, Loveland, OH, United States  
Scheibel, Jeffrey John, Loveland, OH, United States  
Cripe, Thomas Anthony, Loveland, OH, United States  
Connor, Daniel Stedman, Cincinnati, OH, United States  
Vinson, Phillip Kyle, Fairfield, OH, United States  
PATENT ASSIGNEE(S): The Procter & Gamble Co., Cincinnati, OH, United States  
(U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6306817	B1	20011023
APPLICATION INFO.:	US 2000-479365		20000107 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1998-IB1103, filed on 20  
Jul 1998

	NUMBER	DATE
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PRIORITY INFORMATION:	US 1997-53321P	19970721 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Ogden, Necholus	
LEGAL REPRESENTATIVE:	Cook, C. Brant, Zerby, Kim W., Miller, Steven W.	
NUMBER OF CLAIMS:	41	
EXEMPLARY CLAIM:	1	
LINE COUNT:	2862	
AB	A surfactant composition comprising:	

alkylarylsulfonate surfactant system comprising at least two isomers of the  
alkylarylsulfonate surfactant of the formula: ##STR1##

wherein:

L is an acyclic aliphatic hydrocarbyl of from 6 to 18 carbon atoms in total;

M is a cation or cation mixture and q is the valence thereof;

and b are numbers selected such that said composition is electroneutral;

R' is selected from H and C.sub.1 to C.sub.3 alkyl;

R" is selected from H and C.sub.1 to C.sub.3 alkyl;

R'" is selected from H and C.sub.1 to C.sub.3 alkyl; any of R' and R" is  
nonterminally attached to L and at least one of R' and R" is C.sub.1 to  
C.sub.3 alkyl; and

A is aryl; and

wherein:

said alkylarylsulfonate surfactant system comprises two or more isomers with  
respect to positions of attachment of R', R" and A to L;

in at least about 60% of said composition, A is attached to L in the  
position which is selected from positions alpha- and beta- to either of the  
two terminal carbon atoms thereof; and

wherein further said alkylarylsulfonate surfactant system has at least one  
(preferably both) of the following properties:

said alkylarylsulfonate surfactant system has a ratio of nonquaternary to quaternary carbon atoms in L of at least about 10:1 by weight, when said quaternary carbon atoms are present; and

there is no more than 40% by weight loss as measured by Hardness Tolerance Test.

L44 ANSWER 7 OF 7 USPATFULL on STN

ACCESSION NUMBER: 2001:131255 USPATFULL Full-text

TITLE: Detergent compositions containing mixtures of crystallinity-disrupted surfactants

INVENTOR(S): Scheibel, Jeffrey John, Loveland, OH, United States  
Cripe, Thomas Anthony, Loveland, OH, United States  
Kott, Kevin Lee, Loveland, OH, United States  
Connor, Daniel Stedman, Cincinnati, OH, United States  
Burckett-St. Laurent, James Charles Theophile Roger, Cincinnati, OH, United States  
Vinson, Phillip Kyle, Fairfield, OH, United States  
PATENT ASSIGNEE(S): The Procter & Gamble Company, Cincinnati, OH, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6274540	B1	20010814
APPLICATION INFO.:	US 2000-479369		20000107 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. WO 1998-IB1102, filed on 20 Jul 1998		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-53319P	19970721 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	GRANTED	
PRIMARY EXAMINER:	Ogden, Necholus	
LEGAL REPRESENTATIVE:	Cook, C. Brant, Robinson, Ian S., Zerby, Kim Wm.	
NUMBER OF CLAIMS:	20	
EXEMPLARY CLAIM:	1	
LINE COUNT:	2987	

AB A cleaning composition comprising:

a) about 0.1% to about 99.9% by weight of said composition of an alkylarylsulfonate surfactant system comprising from about 10% to about 100% by weight of said surfactant system of two or more crystallinity-disrupted alkylarylsulfonate surfactants of formula

(B-Ar-D)a(Mq+)b(Defined herein after); and

b) from about 0.00001% to about 99.9% by weight of said composition of cleaning composition adjunct ingredients, at least one of which is selected from the group consisting of: i) deterative enzymes; ii) organic detergent builders; iii) oxygen bleaching agent; iv) bleach activators; v) transition

metal bleach catalysts; vi) oxygen transfer agents and precursors; vii) polymeric soil release agents; viii) water-soluble ethoxylated amines having clay soil removal and antiredeposition properties; ix) polymeric dispersing agents; x) polymeric dye transfer inhibiting agents; xi) alkoxylated polycarboxylates; and xii) mixtures thereof.



## SEARCH HISTORY

=&gt; d his ful

(FILE 'HOME' ENTERED AT 16:13:04 ON 10 MAR 2007)

FILE 'CASREACT' ENTERED AT 16:13:29 ON 10 MAR 2007

E CUMENE HYDROPEROXIDE/CN

L1 319 SEA ABB=ON CUMENE HYDROPEROXIDE

L2 319 SEA ABB=ON L1 AND CUMENE?

L3 37 SEA ABB=ON L2 AND OXYGEN

L4 0 SEA ABB=ON L3 AND POLY?(W)4(W)?VINYLPIRIDINE?

L5 0 SEA ABB=ON L3 AND ?POLYVINYLPIRIDINE?

L6 1 SEA ABB=ON L3 AND ?VINYLPIRIDINE?

D AU

FILE 'REGISTRY' ENTERED AT 16:15:38 ON 10 MAR 2007

E CUMENE HYDROPEROXIDE/CN

L7 1 SEA ABB=ON "CUMENE HYDROPEROXIDE"/CN

E CUMENE/CN

L8 1 SEA ABB=ON CUMENE/CN

E POLY-4-VINYLPYRIDINE/CN

E 4-ETHENYLPYRIDINE/CN

L9 1 SEA ABB=ON 4-ETHENYLPYRIDINE/CN

E DIETHENYLBENZENE

E DIETHENYLBENZENE/CN

L10 1 SEA ABB=ON DIETHENYLBENZENE/CN

E ETHENYLETHYLBENZENE/CN

E ETHYLETHYLBENZENE/CN

L11 1 SEA ABB=ON METHYL CHLORIDE/CN

L12 0 SEA ABB=ON L7 AND L8 AND L9 AND L10 AND L11

L13 0 SEA ABB=ON L7 AND L8

FILE 'CASREACT' ENTERED AT 16:18:54 ON 10 MAR 2007

L14 84 SEA ABB=ON L7 AND L8

L15 0 SEA ABB=ON L14 AND (L9 OR L10 OR L11)

L16 0 SEA ABB=ON L14 AND ?POLYVINYLPIRIDINE?

L17 1 SEA ABB=ON L14 AND ?VINYLPIRIDINE?

L18 0 SEA ABB=ON L14 AND (L10 OR L11)

L19 9 SEA ABB=ON L14 AND ?ETHYLBENZENE?

L20 0 SEA ABB=ON L14 AND ?ETHENYLETHYLBENZENE?

FILE 'REGISTRY' ENTERED AT 16:20:43 ON 10 MAR 2007

L21 STR

FILE 'CASREACT' ENTERED AT 16:22:34 ON 10 MAR 2007

L22 STR L21

L23 7 SEA SSS SAM L22 ( 17 REACTIONS)

L24 88 SEA SSS FUL L22 ( 148 REACTIONS)

L25 1 SEA ABB=ON L24 AND (?OXID?(W)?AGENT? OR ?RESIN? OR ?INORG?(W)?

CATION?)

L26 0 SEA ABB=ON L24 AND (L9 OR L10 OR L11)

L27 1 SEA ABB=ON L17 OR L25

FILE 'HCAPLUS' ENTERED AT 16:30:44 ON 10 MAR 2007

L28 788 SEA ABB=ON L7 AND L8

L29 14194 SEA ABB=ON (L7 OR ?CUMENE?) AND (L8 OR ?CUMENE?(W)?HYDROPEROXI

DE?)

L30 8387 SEA ABB=ON L29 AND (?REACT? OR ?PROCESS?)

10/507,227

L31 848 SEA ABB=ON L30 AND (?OXID?(W)?AGENT? OR ?RESIN? OR ?INORG?(W)?  
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L32 81 SEA ABB=ON L30 AND (L9 OR 4(W)?ETHENYLPYRIDINE? OR L10 OR  
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)?CHLORIDE?)  
L33 4 SEA ABB=ON L32 AND ?LIQUID?(W)?PHASE?  
L34 856 SEA ABB=ON L30 AND (?OXID?(W)?AGENT? OR ?RESIN? OR ?ORG?(W)?CA  
TION?)  
L35 12 SEA ABB=ON L34 AND (L9 OR 4(W)?ETHENYLPYRIDINE? OR L10 OR  
?DIETHENYLBENZENE? OR ?ETHENYLETHYLBENZENE? OR L10 OR METHYL?(W  
)?CHLORIDE?)  
SELECT RN L35 1-12

FILE 'HCAPLUS' ENTERED AT 16:37:08 ON 10 MAR 2007

FILE 'REGISTRY' ENTERED AT 16:37:13 ON 10 MAR 2007

L36 432 SEA ABB=ON (108-88-3/BI OR 75-09-2/BI OR 1321-74-0/BI OR  
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OR 116866-99-0/BI OR 118-75-2/BI OR 118286-24-1/BI OR 119-64-2/  
BI OR 1191-17-9/BI OR 1195-32-

FILE 'HCAPLUS' ENTERED AT 16:38:12 ON 10 MAR 2007

L37 12 SEA ABB=ON L35 AND L36  
L38 12 SEA ABB=ON L37 AND (?REACT? OR ?PROCESS?)

FILE 'USPATFULL' ENTERED AT 16:44:22 ON 10 MAR 2007

L39 8698 SEA ABB=ON L30 AND (?OXID?(W)?AGENT? OR ?RESIN? OR (?ORGANIC?  
OR ?INORGANIC?) (W)?CATION?)  
L40 1554 SEA ABB=ON L39 AND (L9 OR 4(W)?ETHENYLPYRIDINE? OR L10 OR  
?DIETHENYLBENZENE? OR ?ETHYNYLETHYLBENZENE? OR L11 OR METHYL?(W

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) ?CHLORIDE?)
L41      1540 SEA ABB=ON  L40 AND ?REACT?
L42      178 SEA ABB=ON  L41 AND ?LIQUID?(W)?PHASE?
L43      137 SEA ABB=ON  L42 AND ?SYNTH?
L44      7 SEA ABB=ON   L43 AND ?RELEAS?(4A)?INORG?

```

FILE HOME

FILE CASREACT

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FILE CONTENT:1840 - 4 Mar 2007 VOL 146 ISS 10

New CAS Information Use Policies, enter HELP USAGETERMS for details.

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*****
*
*      CASREACT now has more than 12 million reactions
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Some CASREACT records are derived from the ZIC/VINITI database (1974-1999) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

```

STRUCTURE FILE UPDATES:    9 MAR 2007  HIGHEST RN 925981-65-3
DICTIONARY FILE UPDATES:  9 MAR 2007  HIGHEST RN 925981-65-3

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New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

FILE BEILSTEIN

FILE LAST UPDATED ON JANUARY 10, 2007

FILE COVERS 1771 TO 2006.

**FILE CONTAINS 9,780,003 SUBSTANCES**

>>>PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query.

Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For more detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

\*\*\*\*\*  
 \* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. \*  
 \* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE \*  
 \* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE \*  
 \* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. \*  
 \* FOR PRICE INFORMATION SEE HELP COST \*  
 \*\*\*\*\*

#### NEW

\* PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.  
 \* NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.

#### FILE USPATFULL

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 8 Mar 2007 (20070308/PD)  
 FILE LAST UPDATED: 8 Mar 2007 (20070308/ED)  
 HIGHEST GRANTED PATENT NUMBER: US7188369  
 HIGHEST APPLICATION PUBLICATION NUMBER: US2007056070  
 CA INDEXING IS CURRENT THROUGH 8 Mar 2007 (20070308/UPCA)  
 ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 8 Mar 2007 (20070308/PD)  
 REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2006  
 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2006

#### FILE HCAPLUS

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